

THE
ANNUAL ADDRESS
TO THE
BERWICKSHIRE
NATURALISTS' CLUB,
DELIVERED AT
THE ANNIVERSARY MEETING,
HELD AT
ALNMOUTH, IN NORTHUMBERLAND,
ON
THURSDAY, THE 24TH DAY OF SEPTEMBER, 1857.

BY
WM. DICKSON, F.A.S.,
OF WHITECROSS, IN BERWICKSHIRE, AND OF ALNWICK, IN
NORTHUMBERLAND.

"MARE ET TELLUS, ET, QUOD TEGIT OMNIA, CÆLUM."

ALNWICK:
PRINTED AT THE MERCURY OFFICE BY WILLIAM DAVISON.

1857.

PROCEEDINGS

OF THE

BERWICKSHIRE NATURALISTS' CLUB.

The Annual Address, delivered at Alnmouth, on the 24th of September, 1857. By WILLIAM DICKSON, F.A.S., President for the year.

It now becomes my duty, to resign into your hands, the office of President, an honor, which was thrust upon me, at your last anniversary meeting.

As a Berwickshire Landowner, and a member of your Club, of some years' standing, I could hardly have refused this responsibility, yet I should have been glad to have escaped from it, from a feeling of inability, satisfactorily to discharge its duties; besides, I found remonstrance was in vain, owing to a stringent Rule of the Club.

I, therefore, felt I had no option; I threw myself on your forbearance, and I have not been disappointed. The several meetings of the year have been marked, as usual, with pleasant intercourse. The early rising and the delightful rambles, in well chosen localities, raise the spirits, and conduce to health and enjoyment.

"This sunny morning, Roger, cheers my blood,
And puts all nature in a jovial mood—
How heartsome is't to see the rising plants!
To hear the birds chirp o'er their pleasant rants!
How wholesome is't to snuff the caller air,
And all the sweets it bears, when void of care!"

The papers read have, I think, added something to the stores of the natural and local history of the district, recorded from time to time, in your printed transactions.

The motto chosen by our Founder, "*Mare et tellus, et, quod tegit omnia, Cælum,*" marks the extended range he intended for your examination. What you have already done, proves you have not worked in vain. I trust you will proceed in your onward course, and that at every meeting of the Club, each member will endeavour to add his mite and thus increase the general stock of knowledge.

Many of your Presidents have been men of great science, learning and ability, and this makes me feel my unfitness for the office, especially as there are now, within your own body, so many individuals much better qualified to preserve the character of your Club.

The chief duty of President, I imagine, is to attend all the meetings if possible, to enable him the better, in his address, to review the proceedings of the period over which he has presided—to note the papers read and the leading features of the information obtained—to mention new plants and their localities—and, indeed, all that is curious, novel, and interesting in animal or vegetable life, brought to light by the investigations of the Club. And to touch, agreeable to the original rules, on the antiquities and local history of the district. In all this he receives much assistance from the experience and abilities of the Secretary, as well as from individual members of the society—especially, if he be a naturalist, he who,

"peeps around
For some rare flowret of the hills, or plant,
Of craggy fountain; what he hopes for, wins;
Or learns at least, that 'tis not to be won."

Or a geologist,

"Who, with pocket hammer smites the edge
Of luckless rock, or prominent stone, disguised
In weathered stains, or crusted o'er by nature
With her first growth, detaching by the stroke
A chip or splinter, to resolve his doubts;
And, with that ready answer satisfied,
The substance classes, by some barbarous name."—

Thus Wordsworth ironically describes our most active and useful members.

The anniversary meeting was held at Alnwick, on Wednesday the 24th of September, 1856. The members present (according to seniority of election) were, Robert Embleton, P. J. Selby, the Rev J. D. Clark, Wm. Dickson, F.A.S., George Tate, F.G.S., the Rev. L. S. Orde, the Rev. Wm. Darnell, John Church, the Rev. Geo. Selby Thompson, Dr. G. R. Tate, and John Church, jun., (a visitor.)

After breakfasting at the Star Inn, the members proceeded to view the Cartoon drawn by William Dyce, Esq., R.A., of the School of Design, Somerset House, from which the stained glass of the great east window of St. Paul's Church, Alnwick, is copied. As a work of art, this Cartoon is unrivalled, and will bear a much closer inspection than we were able to devote to it.

The Castle, Barony, Manor, Borough, and Town of Alnwick has been fully described in a History, published by Mr. William Davison, bookseller, in the year 1822, to which I must refer. I may, however, make a few additions and remarks, as they may be useful to future historians.

Alnwick is a Parish by reputation, but in a legal point of view it is only a Chapelry, within the parish of Lesbury. Lesbury, with its chapels of Alnwick, Houghton, and Alnmouth were anciently granted to Alnwick Abbey, by the former Lords of Alnwick; and at the dissolution of monasteries, when the King came to dispose of the Rectorial tithes, the corn tithes of Alnwick are described in the King's grant, parcel of the Rectory of Lesbury.

The Barony of Alnwick was the centre of a great district, and the Castle was always a Fortress of much importance; belonging to the Tysons, De Vescies, and Percies.

Attached to it were Manors in Demesne, that is to say, those which the Barons held in their own hands, and with the produce of which, the dignity of the Baron was kept up. These manors were about twenty-five in number.

Then again, the great Baron of Alnwick, in the days of military tenures, granted out to his followers, other manors,

to be held by them, by Knight Service ; these are called the Manors in Service, and were in number about sixty.

Their services consisted in guarding the Castle of Alnwick and winding a horn to give notice of the approach of an enemy and to alarm the country, besides all the other duties incident to Knight Service. Many of these services, were in very early times commuted into a money payment ; such as “ For cornage, 1s. 8d., for Castle Guard Rent, 6s. 8d. or 13s. 4d.” according to the size of the manor.

These sums are paid by the Lords of many of these manors to the present day, and others have ceased to pay for reasons not now easily discovered ; probably when the Percy estates were in the crown, on attainders, they may have been granted away, and thus released from their allegiance.

In any future history, it will be a curious and interesting chapter to trace the descent of these manors, and how some of them have ceased to be connected with the Barony.

The inspection of the Cartoon leads me to note the erection and endowment of the church of St. Paul. It was one of the many noble and public acts of Hugh the 3rd Duke of Northumberland. It is a perfect model of an early English church ; the light tapering columns are chaste and pleasing, but I am not sure it is so suitable to our cold northern climate as the

“ Massive arches broad and round,
That rose alternate, row and row,
On ponderous columns, short and low,
Built ere the art was known,
By pointed aisle, and shafted stalk,
The arcades of an alley'd walk,
To emulate in stone.”

The length of St. Paul's church is 128 feet, breadth 59 feet, has 2 side aisles and clere story windows, a square tower, embattled, of 100 feet high. It was consecrated by Edward Maltby, Bishop of Durham, on the 16th of October, 1846, and cost above £20,000.

His Grace died in 1817, and since then Her Grace his widow, at a great cost, purchased the mansion and grounds of Croft House, in the immediate vicinity of the church, and

vested them in the Incumbent and his successors for ever, as "*St. Paul's Parsonage.*"

Her Grace also erected in the church a massive monument to the memory of her late husband, a full-length figure of the Duke, in the robes of a Knight of the Garter. The likeness is excellent.

And to crown the whole, the friends of the late Duke, out of respect to his memory, subscribed for a memorial window, to be placed in the east end of that church, of which he was the Founder and Patron. The Cartoon which was furnished by Mr. Dyce, as before mentioned, was sent to the Royal manufactory at Munich, and there the glass work was executed under the superintendence of Professor Ainmüller, in the very best style of the art of glass staining; the King of Bavaria himself taking great interest in having it completed in the most perfect manner.

The subject of the painting is the preaching of the Apostles Paul and Barnabas at Antioch, and so beautiful is the execution, that it is the admiration of all who have seen it.

To understand the work, it is necessary to peruse the 13th chapter of the Acts of the Apostles; but the 46th verse is the one to which the picture has particular reference. It represents St. Paul turning from the Jews to the Gentiles, and in the act of addressing those unbelievers:—" *Then Paul and Barnabas waxed bold, and said, It was necessary that the word of God should first have been spoken to you: but seeing ye put it from you, and judge yourselves unworthy of everlasting life, lo, we turn to the Gentiles.*"

The picture occupies the five principal lights in the window, the centre by the two Apostles, on their left are the Jews, and the Gentiles are on the right side. Rage and intense jealousy are depicted in the countenances of the former, while the latter are characterized by gentleness and meekness.

In the lower part of the centre light is the following inscription:—

"In the year MDCCCLVI this window is placed by public subscription to the much valued memory of Hugh the 3rd Duke of Northumberland, the Founder of this Church."

And at the bottom of the other lights, are the arms of some of the Baronies, which the late Duke was entitled to bear, viz: Percy, Lucy, Brabant, Poinings, Fitz-Payne, Bryan and others.

His Majesty the King of Bavaria was much gratified by the result of the work. The Baron de Cetto, the Bavarian Minister, took an active part.

Sir John Milbank, the English Minister at Munich, interested himself.

And Mr. Muster declares it to be by far the most artistical performance in glass that he has yet seen in this country.

	£.	s.	d.
The cost of the Cartoon was.....	500	0	0
The glass and staining at Munich.....	970	0	0
Wire guards, carriage, and other ex- pences	169	5	0
	<hr/> £1639 5 0 <hr/>		

The acts of the late Duke (of which this noble Church was the closing one of his earthly career) were such as to be worthy of the Good, the Great, and the Noble; they are perpetual and useful memorials, and will live for ever in the hearts of successive generations.

I have dwelt thus much on St. Paul's Church, as it is new matter, and interesting, not only at the place of our October meeting, but to a far more extended circle.

The party then visited the Castle, where His Grace the Duke and the Duchess received them in the Library, showed them the plans and drawings of the various projected improvements; they were then conducted over the whole of the works, under the guidance of Mr. Wilson, the resident architect, and now one of the members of our Club; they admired the solemn grandeur of the inner ward, the space and solidity of the great staircase, and the elegance of the saloon, where the splendid ceiling of carved wood, gorgeous with gold and colouring, was then being put up. From thence they hastily passed through the library, vestibule, drawing and dining-rooms, the chapel and other places. In an address of this kind I

can only venture to give an outline, which may be filled up by some future President, when these great works are completed. The architect is Anthony Salvin, Esq., of London, who has gained his celebrity by his own talents, cleverness, and correct taste.

I am enabled to give a ground plan of the Castle as it existed in 1650, during the time of Algernon the 10th Earl of Northumberland; also, a ground plan of the improvements now in the course of completion, by Algernon, the present and 4th Duke.

GROUND PLAN IN 1650.



1. Corner Tower. 2. Garret. 3. Stables. * Porter's Lodge. 4. Exchequer. 5. Garret. 6. Abbott's Tower. 7. Garret. 8. Outer Ward or Ballium. * Auditor's Tower. 9. Middle Gateway. 10. Inner Ward of Keep or Dungeon. 11. Garret. 12. Entrance. 13. Postern Tower and Sally Port. 14. Garden Tower. 15. Middle Ward. 16. Chapel. 17. Conduit. 18. Constable Tower. 19. Garret. 20. Ravine. Tower. 21. Corner Tower. 22. Stream from the Moors. 23. Moat. 24. Draw Bridge. 25. Entrance.

The alterations made in the Castle about the year 1770, can be seen on reference to Mr. Davison's History of Alnwick, published in 1822.

GROUND PLAN IN 1857.



1. Library. 2. Ante-room. 3. Saloon. 4. Drawing-room. 5. Dining-room. 6. Chapel. 7. Gallery. 8. Bed-room. 9. Dressing-room. 10. Bed-rooms. 11. Dressing-room. 12. Small Dining-room. 13. Vestibule. 14. Corridor. 15. Lobby. 16. Sitting-room. 17. Dressing-room. 18. Bed-room. 19. Dressing-room. 20. Sitting-room. 21. Lifts. 22. Corridor.

His Grace is the fourth great builder in his family, and he is now engaged in improving the residence of his ancestors; preserving all that is ancient, and restoring those parts to their original style of architecture which the false taste of the period, when the last alterations were made, had mutilated. For some years after his accession to the Dukedom, his ample resources were chiefly devoted to draining his extensive estates, making new farm buildings, and in improving, by erections and repairs, the cottages of the labouring classes. These important works are still in progress, and with the outlay at the Castle, give employment to an extensive class of labourers.

Some of the party proceeded to the Parks, and there enjoyed a ramble amidst woods and waters and the varied scenery of those delightful grounds,

“Ever charming, ever new,
When will the landscape tire the view?
The fountains fall, the rivers flow,
The woody valley, warm and low—
The windy summit, wild and high,
Roughly rushing to the sky—
The pleasant dell, the ruined tower,
The naked rock, the shady bower,
The town and village, dome and farm,
Each lends to each a double charm,
Like pearls upon an Ethiop’s arm.”

I must direct the attention of the Club to the Silver Firs (*Pinus picea*) on the rocky banks, overhanging the Lady’s Well, near Hulne Abbey, as being remarkable for health, size, and beauty. His Grace’s Forester has given me the sizes of nine of them, thus :—

	Height in feet.	Girth at three feet from surface.		Contents in Cubic feet.	
		ft.	in.		
1. Silver Fir	108	11	4	340	Average 374 Cubic feet.
2. ditto,	112	10	10	356	
3. ditto,	105	10	2	360	
4. ditto,	107	11	0	345	
5. ditto,	104	12	9	510	
6. ditto,	108	12	3	380	
7. ditto,	109	11	0	395	
8. ditto,	108	13	0	370	
9. ditto,	103	10	10	315	

And on the opposite side of the river, are some Larch Firs (*Pinus larix*) of great size and beauty, having from 110 to 160 cubic feet of timber in each of them.

Nor must I forget to mention the celebrated “*Trysting Tree*,” by the side of the high carriage road, from the bridge at Filberthaugh to Hulne Abbey. This aged and knarled oak, which has for so many centuries braved the fury of the elements, is now so much decayed, you may creep through the

trunk. It is the common oak (*Quercus robur*), and judging from its present circumference, it must have been a splendid specimen when in its prime. I cannot even guess its age. It must have been a great tree in 1624, as at that time it gave its name to the wood in which it stood, as appears from an old vellum plan at Alnwick Castle (tempore James 1st) as "*the Trysting Treewood.*" A board is to be seen among its branches with this name painted upon it. For all that can be said upon the subject of Trysting trees, I must refer you to Johnston's *Eastern Borders*, vol. 1, p. 242. Why it is called the Trysting Tree, I do not know, unless being half-way between the Abbeyes of the Carmelites of Hulne, and the Premonstratensians of Alnwick Abbey, it may have been their place of meeting.

This antique oak, where Holy Friars meet,
 Their beads to tell, or pater nosters say;
 Or, higher converse hold, around this seat,
 By times at night, or in the blaze of day.

Or its trunk may have had around it

"seats beneath the shade,
 For talking age, and whispering lovers made."

Another venerable tree which stood in the wall of the churchyard, called the "Boome Tree," deserves a passing note. It was blown down on Ash Wednesday 17th of February, 1836. It was a noble specimen of the common ash (*Fraxinus excelsior*.)

Girth at the lower part $13\frac{1}{2}$ feet, and the same for 7 feet up, when it divided into two branches. Girth of the bottom of the western branch 10 feet 6 inches, and of the same branch 45 feet from the ground, 6 feet; girth of the bottom of the eastern branch 9 feet, and 35 feet from the ground, 6 feet.

The tree looked sound, but its roots were entirely gone, and when it was blown over the churchyard was not disturbed, and not a root was to be seen.

Many particulars of this tree are recorded in the vestry book; no doubt the name is from "Boome," *saxon*, a tree. —(*Bailey's Dictionary*.)

It was sold by auction, after the circulation of the following handbill:—

A Relic of the Days of our
FOREFATHERS.

To be Sold,
BY AUCTION,

T. STAMP, AUCTIONEER,

On Monday, Feb. the 22nd, inst.

NEAR THE CHURCH GATES,
THE REMAINS OF THE VENERABLE

BOOME TREE,

SUPPOSED to have been Planted in the Reign
of EDWARD the FOURTH, *nearly 400 Years*
ago!

Sale to begin at 2 o'Clock.

Alnwick, February 18th, 1836.

The members reassembled at the Star to dinner; after which, the minutes were read, Captain Selby and others were proposed, for election and I was elected President for the ensuing year.

Mr. George Tate then read a paper upon the Geology of the Farne Islands, now printed in the third volume of our transactions.

The President, Mr. Embleton, was requested to deliver another address, to bring the routine of the Club into its regular course, from which it had been disturbed by the lamented death of Dr. Johnston. This he readily agreed to do, and to read it at the next meeting; this was fixed to be at Belford, and the members were specially invited by the Rev. John Dixon Clark to partake of the hospitalities of his mansion on that occasion.

I may add, with reference to Mr. Tate's paper on the Islands, that they were the patrimony of St. Cuthbert, and one of the most ancient possessions of the church of Lindisfarne, afterwards of Chester-le-Street, and finally of Durham. They continued to be the property of the Prior and Convent of

Durham, down to the time of the dissolution. They were granted by King Hen. VIII. with the other possessions to the Dean and Chapter of Durham, to whom they now belong ; they have for ages been accustomed to be leased for 21 years, renewable every 7 years. The Venerable Charles Thorp is the present lessee thereof, by purchase from a former lessee. He has restored St. Cuthbert's Chapel, and Divine Service is now frequently performed there to the Inhabitants in the summer season. The congregation generally musters about 30.

The views of the Farne Islands, as you look down upon the scene from the walls of Bamburgh Castle, are beautifully developed when well lighted up by the rays of the sun, in a clear summer afternoon.

Cast your fix'd eye, north, south, and far to sea,
Then say, if ever, on a summer eve,
A fairer scene, more pure, or yet more calm,
Or one more lovely, can be looked upon.
The constant murmur of the rolling waves,
Chasing each other with their whiten'd curves,
Upon the bright, the smooth, and yellow sands,
Back'd up behind, with miles of darken'd blue,
Of the deep boundless ocean ; rolling on,
For ever restless, but for ever free.
The hardy sailor even fears to trust
Himself and bark upon its wide domain.
At times, the gentle spray curls on the waves,
Murmurs along the smooth and sandy shore,
With never ending play and joyfulness ;
While the soft breeze, a gentle curl doth raise,
Ending, at last, in a most fearful storm.
And now the breakers, white with yesty foam,
Dash their great curved billows on the strand,
With unresisting, and resistless force,
The very ground is trembling with dismay.
Not so with man, for by a strict decree,
The mighty ocean can not pass its bounds ;
Thus far shalt thou come, but further not,
The smallest grains of sand shall thee restrain,

Hurl back thy waves, and merge them in the deep.
Again, at times smooth as the smoothest glass,
On its fair bosom clouds of freighted ships
In safety rest ; while in an hour or less
All, all are scattered by a sudden gust,
The shore is strewed with wreck, and happy those
Who can in time a place of refuge find
While the storm lasts ; then all again is still.
And where along this dark and dreary coast,
Can such a place be found, so near at hand,
For the half-drown'd and houseless mariner,
As in the chambers of King *Ida's* towers,
Now *Bamburgh Castle*, beetling o'er the deep,
Where thousands have found shelter and a home.
Admire the darken'd Islands in the sea,
On whose rugged sides and igneous rocks,
The whiten'd breakers never cease to play.
The *Crumstone* sunk, then rais'd above the sea,
As the tide flows and re-flows, at each turn
A foaming mass, or like a mirror smooth,
Lurking with danger to the hardy crew,
So fatal is this sunken, rocky shore.
The other islands studded in the sea,
In the sun's rays shine out in bold relief ;
The chapel of the Holy Anchorite,
Once more restored, and his rude dwelling place,
The whiten'd walls of the neat trimmed lighthouse,
And the dull red one farthest out at sea,
Form a sweet picture, and contrasting well
With the dry dulness of those Island Shores.
Then see the churn, which ever and anon,
Sends up its spray, full fifty feet or more,
And then falls back for parent strength to seek ;
Again it rushes, and again sends up
The huge tall column from the mighty main,
Well watched by gaping rustics from the shore.
Observe the vessels sailing to and fro',
The blacken'd steam boats with long trains of smoke,

The tall red lighthouse, where the dauntless maid
Her feats of daring in the sea perform'd.
Whilst all these scenes, the circling horizon,
Incloses in the whole, as in a frame,
Well gilded by the evening setting sun.

The first meeting under my Presidency was held at Belford Hall, on Wednesday the 29th of October. It was of an exceptional nature, being by special invitation from the Rev. J. D. Clark to each member to breakfast and dine with him. The Club broke through one of their rules, to accept of the hospitality of one, who had been their President in 1845, and always an active member of the Society. They certainly were entertained by him in a right splendid manner. The members present were, Robert Embleton, (the Secretary), P. J. Selby, Dr. Clarke, Rev. J. D. Clark, David Macbeath, John Boyd, William Dickson, (President for the year), Rev. George Rooke, H. Gregson, Major Elliott, Patrick Clay, George Tate, Rev. L. S. Orde, W. H. Logan, John Church, William Dickson, the younger, Dr. G. R. Tate, William Boyd, Dr. George Douglas, Rev. George Hans Hamilton, Charles Rea, R. G. Huggup, John Church, jun., Captain George Selby, R.N., Lieutenant Patrick Johnston, R.N., and Stephen Fryar Gillum, (as a visitor.)

The founder of our Club, the late Dr. Johnston, contemplated publishing the Natural History of the Eastern Borders, comprising the district in which our Society has laboured, viz., "*Berwickshire, Liberties of Berwick, North Durham, and the immediately adjacent parts of Northumberland and Roxburghshire.*" He lived to complete one interesting volume, "*The Botany of the Eastern Borders*"; to which is added his Lecture read to the Mechanics' Institute of Berwick, in 1851, entitled "*Our Wild Flowers in relation to our Pastoral Life.*" The same volume contains the valuable paper entitled "*The Fossal Flora of the Mountain Limestone Formation of the Eastern Borders, in connection with the Natural History of Coal,*" by Mr. George Tate, one of our most enthusiastic Members.

Dr. Johnston having left materials towards a second volume for finishing the subject, Mrs. Johnston very kindly stated that the whole of the manuscript was at the disposal of the Club. It was then arranged after some discussion that Mr. Embleton, our Secretary, should examine it, and make a communication upon the matter ; in the mean time, a vote of thanks upon the motion of the President was unanimously given to Mrs. Johnston "for the offer of the manuscript, and to assure her the Club would endeavour to finish what her late lamented husband had so well begun."

Her son, Lieutenant Patrick Johnston, R.N. was proposed as an Honorary Member, and was unanimously elected, as a compliment to the memory of his late father. Besides him, there were elected at the meeting, Mr. John Church, jun., Bell's Hill, Mr. Charles Watson, Dunse, Captain George Selby, R.N., Belle Vue, Alnwick, the Rev. Thomas Leishman, Linton, George Hughes, jun., Middleton Hall. It was also arranged that the third volume of the transactions be completed, to include all papers read at, and previous to the last meeting at Alnwick.

The meetings for the year were fixed as follows :—

Chatton, last Thursday in May (28th).

Yetholm, last Thursday in June (25th).

Coldburnspath, last Thursday in July (30th).

Alnmouth, last Thursday in September (24th).

After breakfast, and after making their arrangements, the parties separated ; some went to Outchester, but the most of them pursued their way to the Belford Crag, over the top of the Crag, through the Camp, scrambling down the sides of the woody brakes, and wandering about the rugged deans.

An interesting addition was made to the *local flora* of Belford, in the beautiful Fern, the *Allosorus Crispus* or *Parsley Fern*, which was found in great abundance, in a crag opposite to what is known by the name of the Chapel Crag. For its discovery the Club is indebted to *Miss Clark*, the daughter of our worthy host—whose attention I hope will be directed to the study of nature and botanical lore, among the crags, the woods, and the fields, of this delightful and

interesting district.—(*Dr. Johnson's Natural History of the Eastern Borders*, page 252.)

The camp is on the highest part of the crags, and is oval shaped and extensive, with formed edges, the centre being clothed with sweet and fine grass.

Belford crags are formed of the Basaltic Rocks, thrown into mis-shapen masses, and having been planted with forest trees, with winding footpaths formed through them, and filled also with natural wood, the hazel, birch, and broom, is thus rendered very attractive to the botanist, and lover of nature.

From the camp the view is very extensive, the west is most limited, still you have Ross Castle, in Chillingham Park; to the East and North you look down upon Holy Island, the Waren and Ross Sands and bay, Beal, Goswick, Scremerston, and all the adjoining shores to Berwick, and much farther to the North. To the South East lie Bamburgh Castle and the Farne Islands, and immediately below you to the North West is Middleton Hall, embedded in woods and pleasure grounds.

Look to the right—thou seest the castled steep
Of regal Bamburgh beetle o'er the deep;
Seest far beneath, the sparkling waters play,
As wins the tide on Waren's beauteous bay;
And on the left, the tower of Holy Isle
Rise, like a rock of snow, in morning's smile.

—(*Story's Guthrum the Dane.*)

The whole of the party, with some additions, assembled at dinner, and sat down to a splendid entertainment at Belford Hall: a breach of the rules certainly, which seemed to sit lightly on the consciences of the Members.

After dinner the late President, Mr. Embleton, read his address, or record of the proceedings up to, and partly inclusive of, the last meeting at Alnwick.

He also read a paper of Mr. J. Hardy's on some coins found at Blackburn, in the parish of Coldburnspath. Two of them of Alexander the 3rd of Scotland, and several of Edward the 1st, 2nd, and 3rd. This paper is now printed at page 259 of our 3rd volume.

Each Coin not being particularized, it is not open to the Members to discover the numbers in each king's reign—indeed, that would be difficult in any case, for the coins of these 3 Edwards are very like each other. It is laid down as a rule, by numismatics (2 Ruding 305) that they are known thus :—

Edward the 1st, by his name on the Coin being *Edw.*

Edward the 2nd, by his name being *Edwa. and Edwar.*

Edward the 3rd, by his name being *Edwardus.*

I cannot tell who *G. Dominis de Line* can be ; but, as the Coin has the King's Arms, the Cross and Pellets, I am inclined to think it may be *Germyn Linch*. He was master of the mint in *Ireland*, 39 Hen. 6th—also in the time of Edward 4th and 5th, and Richard 3rd. He was also in his latter days master of the mint at London.

In this case the deposit, by the careful soul who placed them where they were found, after a lapse of some centuries, must have been later than what is suggested by Mr. Hardy.

The President produced a drawing of a tablet of lead, found at the monastery of Holy Island, in 1856, on the outside of the east window. It was discovered during excavations. The original Tablet is now deposited in the Museum of the Antiquarian Society of Newcastle :—

ANNO :	M :	CC :	XV :	TRANS :	e
LATI :	SVNT :	ISTI :	III :	M ^o I :	s
SILVESTER :	ROBT :	HELIA	s		
AB: ORTO: MONOCHOZ: IN: HC: LOCV	?				

TRANSLATION :

*In the year 1215, were translated these
three monks Silvester, Robert, Helias,
from the orchard (or garden) of the
Monks, into this place.*

This piece of lead is 11½ inches long, 3¾ inches broad, less than 1-8th, and rather more than 1-16th of an inch thick. Weight, 1lb. 4½oz.

Why these Monks were buried in the garden, and then transferred to consecrated ground, I cannot imagine ; unless

for some offence, they were deprived of the benefit of being laid in holy ground for a certain period of time.

BELFORD, the place of our meeting, was one of the ancient Manors of Northumberland. It, along with the Manors of Detchant, Easington, Easington Grange, Elwick, Ross, and Middleton, forms the Chapelry of Belford, in the parish of Bamburgh.

I do not find Belford mentioned in any record previous to the time of King Henry the 1st.

That monarch enfeoffed *Robert de Muschampe* of this and 24 other Manors, which constituted the Barony of Muschampe, or De Musco Campo, held of the King, in Capite, by the service of 4 Knight's Fees, of ancient enfeoffment.

Cecily, his daughter, was his heir, and she married Stephen de Bulmer, and in the reign of Henry the 2nd, this Barony was enjoyed by him, in her right, until his death, as appears by the return in the Black Book of the Exchequer.—(*Hodgson's Northumberland, part 3, vol. 3, page 303.*)

Then his widow continued in possession till her death, 26 Hen. 2nd.

Thomas was their son, and he assumed his mother's name of De Muschampe. He had some interest in this Barony during his mother's life, for in the 18 Hen. 2nd, he is recorded in the Pipe Rolls as having paid to the Sheriff 100 shillings for seutage.

Two years afterwards, 20 Hen. 2nd, he was attainted for the part he took in conjunction with William the Lion, King of Scotland, in favour of Prince Henry, in the rebellion against his father.—(*Dugdale's Baronage.*)

On his mother's death, 26 Hen. 2nd, the Barony was seized into the hands of the Crown.

The first mention of the town of Belford (Beleford) is by Jordan Fantosme, in his History of the Civil War, in 19 and 20 Hen. 2nd, when it was sacked by the Scots.

At this period it would appear that Lowick was the capital of the Barony, as in the Pipe Roll of this and the following year, the Sheriff accounts for the rent under that head.

In the reign of King John, Wooler was the capital Manor,

as appears by an inquisition in the *Testa de Nevil*.—(*Hodg. part 3, vol 1, p. 231.*)

This Thomas de Muschampe married Maud, the daughter of William de Vesey, and the King must have been appeased in some way, for the Barony descended to,

Robert, his son and heir; from him it came to

Robert, his son and heir, who died 1299 without issue male, and was buried in the Abbey of Melrose.—(*Cronica de Mailros.*)

At that time, Warin de Beleford held of Robert de Muschampe one carucate of land, by Knight's Service, as the 12th part of one Knight's fee, whilst William, the Cook, held two Bovates in Socage by the appropriate payment of one pound of cinnamon.—(*Testa de Nevil. Hodg. 211.*)

The last Robert de Muschampe left three daughters, his coheireesses, viz :—

1. *Cecilia*, who married the son of *Odonel de Ford*. They had one daughter, *Isabella*, who married *Adam de Wigton*, but she left no issue, and her two sisters were her coheireesses.
2. *Margery*, aged 24, in 1299 married the *Earl of Strath-erne*, and left two daughters, viz :—
 1. *Murilda*, aged 10, in 1254 died an infant.
 2. *Margery*, aged 6, in 1254, and she married *Nicholas de Graham*; he proved his title in 1293, before the King's Justices Itinerant.
3. *Isabella*, who married *William de Huntercombe*; they had issue :—
 1. *Walter de Huntercombe*, who was in possession of his moiety in 1293; he also proved his title in that year.

Thus, this Extensive Barony became divided into two parts. The Moiety of Belford, (inter alia) which belonged to *Nicholas de Graham*, descended to *John Graham*, his son and heir, and from him to his only child, *Alice Graham*; she married *Nicholas, Baron de Meinil*, and they had an only child, *Elizabeth, Baroness de Meinil*. She married *John Lord Darcy*, who died 1356, leaving children. She survived

her husband, and married Peter de Malolacu ; her eldest son was John Lord D'Arcy, ob. inf. æt. 1362, S. P.

Philip, his brother and heir, succeeded him, and sat in parliament from 1377 to 1397—ob. 1398.

John D'Arcy, his son and heir, sat in parliament from 1399 to 1411—ob. then

Philip Lord D'Arcy, son and heir, ob. inf. æt. 1418, S. P. M. leaving two children, viz.—*Elizabeth*. who married Sir James Strangeways, and *Margery* who became the wife of Sir John Conyers, between whose descendants the Baronies of D'Arcy, and Meinil are now in abeyance.

In 1460, I find the "*Castrum de Beleford*" as belonging to Dni de D'Arcy.

I find in 20 Ed. 4th, 1461, that Thomas de Ilderton and Thomas Grey were seized of the Manor of Belford, but that could only have been as Trustees; for the D'Arcy and Lilburn family were certainly the real owners at the time, and for long subsequent thereto.

Sir John Conyers, by Margery D'Arcy, his wife, had Sir John Conyers, K.G., his eldest son and heir; to him succeeded William Conyers, his son and heir, 1506—d., 1524. Christopher Conyers, his son and heir, 1524—ob., 1538. John Conyers, his son and heir, 1538—ob., 1557, S.P.M. His daughters were his heirs, but in 1640 all their issue had failed excepting Elizabeth, the eldest daughter, who married Thomas Lord D'Arcy, and so in the Feodary's Book it is recorded under date, 10 Elizabeth, 1568, that the heirs of Lord Conyers were seized of half of the Ville, of Belford and Easington.

Conyers D'Arcy, the son of this Elizabeth, became Baron Conyers, Jure Matris, and one of the co-heirs of the Barony of D'Arcy and Meinil, from whom the Duke of Leeds is descended, and is the successor to those Ancient Honors.

I do not find how this moiety of Belford afterwards passed away from the D'Arcy family, but it must have been soon after this period.

The other moiety which formerly belonged to Walter de Huntercombe came to

John de Lilburn, 29 Ed. 3rd.

William de Lilburn, 45 Ed. 3rd.

John de Lilburn, 1 Hen. 4th.

Henry de Lilburn, 12 Hen. 4th.

John de Lilburn, 17 Hen. 6th.

Elizabeth Lilburn, daughter and co-heir, 18 Hen. 8th,
of John de Lilburn of Shawdon.

She married Thomas Armorer, and I find in the 10th of Elizabeth, 1568, he was seized of half the Ville, of Belford and Easington.

He probably after this acquired the D'Arcy moiety by purchase.

He had by his wife Elizabeth Lilburn, three sons, viz.—

Francis the eldest.

Thomas Armorer.

Leonard Armorer, who had a son John.

Francis the eldest son, was of Belford, and married Constance, daughter of Carr, of Hetton. Their issue were:—

Roger.

Henry married a daughter of Clavering, and had
had two sons—Robert and George.

John, who had a son John.

Mark, who married a daughter of Grey, of Horton.

Cuthbert, who had two sons—David and William.

Roger Armorer, the eldest son, was of Belford, and married Constance, daughter of Thomas Bradford, Alderman of Berwick, and they had issue :

Thomas.

Clement, who married Barbara, daughter of Hume,
and had two sons—Alexander and Roger.

Thomas Armorer, the eldest son, was living in 1615. He married Margaret, daughter of Robert Clavering, of Callaly, and had 6 children :

Thomas, son and heir, aged 30, in 1615, married Catherine, daughter of Nicholas Forster, of White House, they had no children.

Ephraim.

Nicholas and William.

Constance and Mary.

Ephraim Armorer, of Belford, the second son, married Ann, daughter and heir of George Middleham, of Alnmouth, a family of long standing there, and the chief proprietor of that place. They had two children,—

Ephraim, son and heir, aged 1 year in 1615.

Margaret——(*Harl. Mss.* 1448, fo. 45.)

Soon after this, Belford came into the possession of the ancient family of Forster; but I do not know how, probably by purchase, for in 1639, the manor of Belford belonged to John Forster, of Bamburgh Castle.

In 1663 it was worth £300 a year, and was then the property of Lady Forster.

It became in more recent times the estate of Abraham Dixon, Esq., to whom was granted a weekly market on Tuesdays, and two fairs yearly, (14 Geo. II. part 2. m. 18); from him it descended to his son, of the same name. His only sister married Mainwaring Ellerker, Esq., and Mr. Dixon devised it to Mr. Onslow, his sister's grand-child.

By this means it became part of the possessions of Lord Onslow, by whom it was sold to some gentleman in Scotland; and ultimately it was purchased by the late William Clark, Esq., of Benton, near Newcastle-upon-Tyne. He very much improved the estate, the house and grounds, and left it to his eldest son, the late William Brown Clark, Esq., and his issue male. Here the latter lived from 1837 to 1840, as owner; but dying in 1840 without such issue, it passed under the entail to the Rev. John Dixon Clark, his Brother, the present resident owner thereof, our excellent host upon the present occasion, and one who takes much interest in the prosperity of our Club.

I may add, that on the 23rd of May, 1722, David Graham, the eldest son of the Duke of Montrose, was created Earl and Baron Graham of Belford, no doubt from some old connection with this manor, in the persons of the abovenamed Nicholas de Graham, John, his son, and Alice de Graham, his daughter.

The second meeting was held at CHATTON, on Thursday, the 28th of May, 1857. The members present were, R. C.

Embleton, P. J. Selby, the Rev. J. Dixon Clark, Robert Home, William Dickson, the Rev. Matthew Burrell, *Vicar of Chatton*, Major Elliott, the Rev. William Darnell, William Boyd, Charles Rae, Captain Selby, R.N., and the Rev. John Bigge, Frederick Wilson, *of Alnwick Castle*, and John Charles Langlands, as visitors.

After breakfasting at the Blue Bell, the party proceeded to Chillingham, first viewing in their way the improvements making in the parish Church, at Chatton, which is being altered from a barn-like building, into a structure in the early English style of Architecture.

The Vicarage House and grounds reflect the greatest credit on the present Vicar, they are perfect in every comfort, and handsome in appearance. It is by his exertions chiefly that the Village is so much improved since our last meeting at this place.

The Castle of Chillingham, from the beauty of its situation, embosomed in stately woods, and surrounded by a great extent of sylvan scenery, from the wild character of the park in which it stands, coupled with old associations, is certainly one of those grand baronial residences, of which the district ought to be proud.

When the Club visited it, the fresh and light green foliage was in full leaf, and contrasted beautifully with the dark shades of the evergreen pines. Nothing could be more enchanting than many of the scenes in the park, and perhaps none more pleasing than the long vista of lime trees on each side of the broad carriage drive, the delicate shining freshness of their leaves, and the light and feathery formation of their branches.

The Park contains the celebrated breed of cattle, supposed to be the original British Byson. For details concerning them, I must refer to the paper of Mr. Luke Hindmarsh on this subject, read to the British Association, at Newcastle, and to the interesting letter addressed to him by the *Earl of Tankerville*, on the 8th of June, 1838.

The highest part of the park is called "*Ros Castle*," which is visible from a great distance. The origin of the name is

left in obscurity. It may be out of compliment to the great northern baronial family of "*De Ros*," who were extensive proprietors of manors in this part of the country; one of whom was the owner and builder of Wark Castle, on the Tweed. There are no erections upon it, and it is only called a Castle, or "*Ros Castle*," from its high commanding and almost inaccessible situation. This family take their name from the manor of *Ros*, in the adjoining parish of Belford.

Another curious object in natural history, is that of the live toad, which was discovered in the centre of a block of marble, in preparing it for a chimneypiece in Chillingham Castle.—(*Wallis's Northumberland.*) It will defy the members of our Club to say how it got there, and for how many ages it was immured, without air or food, in the depth of the solid rock.

The *Hurle Stone* is about a mile west of Chillingham, near the public highway, built on an eminence in a field. I do not know the meaning of its name. In the endowment of Chillingham Vicarage, it is referred to as the "*Stone Cross*," and may have been a road-side cross when these things were common in the land.

The party assembled at 4 o'clock to dinner, after which, as president, I read a communication from Philip Hardwick, Esq., relative to the Chapel of Bewick, which I do not further notice, as it will be printed in our transactions.

I also produced for examination, a series of drawings of the Chillingham Tomb, made forty years ago.

F. Wilson, Esq., the resident architect, at Alnwick Castle, pronounced it to be of the perpendicular character, and of the date of about 1450, and of which he said there are many examples in different parts of England.

Some portions of a long paper prepared by the Rev. James Raine, for the Mechanics' Institute, at Durham, were read. It related to the life of a distinguished member of the Chillingham family, and therefore I made the following short note of it.

Dr. Robert Grey was the eldest son, by a second wife, of Sir Ralph Grey, of Chillingham. His mother was daughter of Sir Thomas Mallet, of Enmore, in Somerset, and had been previously the wife of Sir Thomas Palmer.

His eldest brother (by his father's first marriage) was William Grey, the first Lord Grey of Warke, and the direct lineal ancestor of the Earl of Tankerville. His uncle was Sir Edward Grey, of Howick, the youngest brother of his father, and the ancestor of the present Earl Grey, of Howick.

Dr. Grey was born in 1610, educated first at Northallerton, and in 1617 he delivered an address from the school, to King James, on his progress into Scotland.

In 1623 his father bequeathed to him the Manor of Langton-upon-Swale, and in the same year his mother appointed a tutor to him and his brother Edward, with a salary of £20 a year, under the supervision of Dr. Neale, Bishop of Durham.

He was sent to Christ's College, Cambridge, and became a Fellow. He took orders as a Clergyman, but from the necessities of the times, he, as a soldier, joined the fortunes of his King.

In 1644 he was among those besieged in Millum Castle. At that time his brother, Lord Grey, was fighting on the side of the Parliamentarians.

In 1652 he nearly lost his estate for his loyalty, but was released, upon promising to take what was called the engagement.

On the 15th of March, 1652, he was collated to the Rectory of Bishopwearmouth, and on the 10th of May following, to the 8th Stall in Durham Cathedral; but these preferments were in name only, the Church being then in the hands of the Usurpers.

In 1660 he was by mandamus restored to his preferments, and was then in his 50th year, and he enjoyed them for nearly another half century.

King James II. succeeded in 1684. He endeavoured to bring the realm to acknowledge the Pope, contending also for power to dispense with the laws at his Kingly pleasure. Dr. Grey and others were not so pliant, or so easily converted to such views. The Bishop of Durham (Crewe) pressed Dr. Grey and Dr. Morton to read King James's declaration for the dispensing power in their parish churches, which they declining and arguing against it, his Lordship angrily told the Dr. that

his age made him doat, and that he had forgot his learning. The good Dr. briskly replied, he had forgot more learning than his Lordship ever had. Well (said the Bishop) I'll forgive and reverence you, but I cannot pardon that blockheaded Morton, whom I raised from nothing. They, therefore, took their leave of the Bishop, who, with great civility, waited upon them to the gate of Durham Castle, and the porter opening the wicket or postern only, the Bishop said, "sirrah, why don't you open the great gates." "No, my Lord, (says the Rev. Dr. Grey) we will leave the broad way to your Lordship, the straight way will serve us."

In King James's time, riding on horseback from his rectory at Bishopwearmouth to Durham, Mr. John Lamb, one of King James's Justices of the Peace, a busy active man for that party, and raised from being a coachman in Mr. Chaloner's family, overtook the Dr. and sneered at him, and told him he wondered he could ride on so fine a palfrey, when his Saviour was content to ride on a colt, the foal of an Ass. The Dr. replied, "'tis true, Sir, but the King has made so many asses Justices of the Peace lately, that he has not left me one to ride upon."

I cannot trespass further by extracting more from Mr. Raine's interesting paper, but it is evident Dr. Grey was a most upright, religious, and charitable man, and spent his revenues and the income of his estates, in relieving the distressed. I must refer to that paper, and to Mr. Raine's History of North Durham, for further particulars.

He was found dead at his devotions, at Bishopwearmouth, in 1704, aged 94.

He was great uncle to Ford Lord Grey, Earl of Tankerville.

Ralph Lord Grey was his administrator, and his freehold estates ultimately came to him.

The gardens at Chillingham were not in their fullest summer costume. The party admired the Blue Wistaria (*Wistaria Chinensis*) growing in a healthy state against the Western Wall of the flower garden at the Castle, its handsome light blue pendent flowers, in large clustered spikes, were coming out, which they do before the leaves. This plant is about 8

feet high, but in length it is 120 feet, or 20 yards on each side of the stem—a native of China, it grows very fast, the shoots are cut back and spurred for flowering, and pruned like a pear tree against a wall.—(11. *Cottage Gardener*, 91.)

The Church is quietly situated on the North side of the great wood, at the East end of the village, near to the Vicarage, and to the entrance to the Castle. It is an ancient Norman building. The earth should be taken from its side walls, and properly drained all round. I recollect it formerly, with festoons of ivy hanging from its roof inside the Church and Chancel, but now it is in a very good state of repair.

There is one mural monument to a daughter of Robert Thorp, vicar of the parish, sister to the present Archdeacon Thorp.

The Font is old and curious, having an inscription thus:—

GOD BLESS THE CHVRCH.

M

R + W. ANNO, 1670.

But the great charm of this little Church is the beautiful Tomb before mentioned, of which the following is a slight description.

It is of carved stone, oblong, and about 3 to 4 feet high, richly ornamented and coloured. At the sides and end are heraldic devices, shields, and figures of saints and other famous personages, in niches alternately; on each side four of such figures, and five shields, and at the end two figures and three shields; the other end abutting against the wall.

On the tomb lie the effigies of a knight and his lady, both resting their heads on cushions, apparently dressed in the costume of the period; he with a red tunic, and she with a curious head dress with loose flowing robes.

On the sides of the tomb are two shields with the arms of Grey, "*Gules, a Lion Argent*," and at the end of the tomb, in the centre of the slab, or cover, are two angels with wings, holding a shield on which the arms of Grey are impaled, along with the arms of the lady. Her arms prove her to be a Fitzhugh, of Ravensworth, for in the first and second quarters are the arms of that family, viz., *az. three chevrons braced*

at the base or, a chief of the last, and in the third and fourth quarters are the coat arms of Marmion, ‘*Vaire, a fess Gules.*’

Along the edge of the slab are alternately, a *scaling ladder* and a *cloke*, but the chief crest of the Greys is the *Ram’s head* placed above the arms. At the back of the tomb against the wall appears an erection of later date, above which are the Grey arms (Lion) and crest (Ram’s head) with a place for an inscription quite vacant, except at the bottom the family motto occurs “*de bon vouloir Servir le Roy.*”

It is clear this tomb was erected to the memory of Sir Ralph Grey, of Warke, who was born at Chillingham, knighted in 1425 by the Duke of Bedford, and who died in 1443. He married Elizabeth Fitzhugh, and she assumed the arms of Fitzhugh from her father, and those of Marmion from her mother, the latter being a co-heir of that ancient Barony.

It is impossible to do justice to this beautiful monument by any description, and it is to be hoped that the Right Honourable the Lord Ossulston, of Chillingham Castle, will cause careful drawings to be made, engraved, and coloured, he being the direct lineal descendant of Sir Ralph and Lady Grey, and the present possessor of Chillingham and Wark.

This noble inheritance having descended to him, in regular succession, from the parties who now rest from their labours in the silence of this tomb, it is his sacred duty to protect those valuable specimens of monumental affection.

In addition, let me refer the Club to the account given of it by the Rev. James Raine, of Durham, in his elaborate and valuable History of North Durham.

I must not leave Chillingham, without recording the fact that King Henry the 3rd was at that place in the 39th year of his reign.

The King was at Durham on the 22nd of August; Newcastle, on the 24th and 28th of August, and 1st of September; Alnwick, on the 3rd of September; Chyvellingham, on the 5th of September; Wark, on the 6th, 7th, 14th, 16th, and 21st of September; and on the latter day (21st of September), he issued a writ from Wark, to the Mayor and Bailiffs of

York, to pay £100 for the expences of the Queen and her household, in living *after* us, at Warke; that is, for the expences of Her Majesty's living there, after the King had left *that* place.—(*Liberate Rolls.*)

The History of CHATTON may be very shortly told. It was one of the Manors attached to the great Barony of Alnwick.

Previous to the Norman Conquest, it was possessed by the powerful Northern Baronial family of Tyson.

At the Conquest (A.D. 1066) it came by grant of King William to the De Vescys. In that family it continued 243 years, till the reign of Edward II.

In A. D. 1309, it was purchased by the great Yorkshire Baron, Henry de Percy, in whose family it has continued ever since, (saving occasional attainders), and it now belongs to Algernon Percy, Duke of Northumberland, the Chief of that Noble and Ancient Race.

I must also be permitted to note that Chatton may be on an equality with Chillingham, that King Edward I. was at the former place on the 16th of August, 1291; he was then on the Borders to decide upon the rights of the rival claimants to the Kingdom of Scotland:

1st of August the King was at Coldstream.

2nd of August at Berwick.

12th of August ditto.

16th of August at Chatton, from whence he issued the following writ.

Liberate Rolls Anno 19, Edward I. m. 2.

Rex Baronibus suis de Scaccario Salutem. Allocate Waltero de Cambehou, Constabulariō Castri Nostri de Bamburgh in Exitibus Ballivæ suæ quadriginta et sex solidos et Octo denarios quos per preceptum nostrum solvit pro Robis ad opus *Resi* ab Maylgon et *Canani* ab Merdath Walensium in Castro predicto Existentium, et unius garcionis eis ministrantes, videlicet, pro robis *Resi* et *Canani* quadraginta solidos et pro robâ predicti garcionis sex solidos et octo denarios de anno regni nostri decimo nono Et sex libras et sex decem denarios quos similiter per preceptum nostrum posint in Expensis predictorum *Resi* et *Canani* et eorum garcionis in

Castro predicto existentium a die veneris proximâ ante festum Sancti Valentini martiris anno regni nostri decimo nono usque diem Mercurii in festo assumptionis Beatæ Mariæ anno Eidem, silicet, pro expensis utriusque predictorum *Resi* et *Canani* per diem tres denarios et dicti garcionis per diem duos denarios, nisi prius inde allocationem habuit in toto vel in parte.

Teste Rege apud Chatton, xvj die Augusti.

There were five individuals proposed as Members, J. C. Langlands, Bewick, the Venerable the Archdeacon Thorp, F. Wilson, Alnwick Castle, Thomas Scott, of Broomehouse, James Gray, of Kimmerston.

The River was much flooded to-day, and proved how necessary it is to have two Bridges across the Till, the one leading south towards Alnwick, and the other north towards Berwick.

The day was wet, and nothing new in Natural History was discovered.

The third meeting of the Club was held at YETHOLM, in Roxburghshire, on the 25th June, 1857, when the following Members met together, Rev. John Baird, R. C. Embleton, (Secretary), Rev. Thomas Knight, Francis Douglas, M. D., John Boyd, Robert Home, William Dickson, (President), Major Elliott, George Tate, Rev. W. Darnell, William Dickson, the Younger, William Boyd, Charles Rea, Lieut. Patrick Johnston, Rev. Thomas Leishman, George Hughes, the Younger, James Grey, and as visitors, Andrew Wauchope, of Niddry, Scott Dudgeon, jun., of Spylaw, Adam Boyd, Esq., and W. Rashleigh.

After breakfasting at the Inn, the party proceeded to pay their respects to the Rev. John Baird, the minister of the parish of Yetholm, and senior Member of our Club. We found he had expected us to breakfast with him, and from some mistake, we lost the substantial and elegant repast he intended for us. His Manse and grounds are remarkable for their neatness, and the thick foliage about them was very grateful on such a hot sultry day. His Kirk had been lately re-built with pitchstone porphyry, and is capable of holding six or seven hundred people.

Most of the party proceeded northward, to Hoseley and Yetholm Lochs, the former about two miles off, and the latter somewhat nearer. The sun was bright and some lagged behind ; those who completed the circuit were much indebted to the hospitalities of Cherry Trees, the pleasant seat of J. Boyd, Esq., one of our Members. The gardens, greenhouses, and shrubberies, called forth unqualified admiration.

Mr. Baird and Mr. Tate went in another direction, to investigate a portion of the Geology of the district.

The river Beaumont meanders through the vale and divides Town Yetholm from Kirk Yetholm, the latter being on its southern bank.

Robert Storey the poet, was born in the neighbouring parish of Kirknewton, and as a shepherd boy, no doubt he often wandered o'er these hills, wrapped in his plaid, with his faithful dog beside him. Thus, he writes of the banks of the Beaumont :—

“ On these hill tops, at break of day,
My feet have brushed the pearly dew ;
And I have marked the dawn star's ray,
Lost in the orient's kindling blue ;
Then turned to see each neighbouring height
In morning's rosy splendour dyed ;
While mists ascending, calm and white,
Disclosed the banks of Beaumont side.”

The hills to the south, consisting of the Cheviot range, are very beautiful, cultivated as far as the plough can reach, and the rest tapering upwards, clothed in rich green. They appear piled on each other, and dotted over with sheep, peculiar to the district, called the Cheviot breed. The country is interspersed with thriving young woods, which give it a warm appearance ; while from the high grounds the views in every direction are pleasingly diversified.

For a correct description of a considerable portion of this range, though rather more towards the east, I again borrow from the Poet of the Borders ; I make the extract from a very splendid edition of his poems, just published under the auspices of the Duke of Northumberland :—

"These mountains wild," began the Maiden, "claim,
 Each for itself, a separate local name.
 We stand on *Lanton Hill*. Not far behind,
 The verdant *Howsdon* woos the summer wind.
 That mountain, with its three wild peaks, before,
 Is styled by dwellers near it, *Newton Torr*.
 The oak-clad ridges, there, of *Akeld*, swell,
 And here the bolder slopes of *Yevering Bell*.
 While towering, yonder, with his patch of snow,
 And proudly overlooking all below,
 Is CHEVIOT's mighty self, his throne who fills—
 Th' admitted Monarch of Northumbrian hills.
 —Two streams you see, one winding still and clear,
 The other hastening on its bright career,
 As glad yon deep and sunless glen to miss—
 The *Beaumont* that we call, the *College* this.
 Beneath yon clump of trees they meet, and then
 Their mingled waters take the name of GLEN.
 An humble stream! which yet, to pious fame,
 Is not without its pure and gentle claim.
 For men relate, that when the Gospel-beam
 Began at first across the land to stream,
 A hundred Saxon converts, in one day,
 Washed in that stream their crimson sins away;
 While angel bands, revealed to mortal sight,
 From cloud and mountain watched the sacred rite?"

—(*Guthrum the Dane.*)

For particulars of this locality I refer to a very accurate account of it, in Mr. Alexander Jeffrey's History of Roxburghshire. He defines the name from *Yet* a gate, and *Ham* a dwelling.

Kirk Yetholm was in olden times celebrated for its race of Gipsies, whom the Kings of Scotland respected at one time, and at others punished with the greatest severity. At one time recognizing by writ the leader as "*our lovile Johanne Faa, Lord and Earl of Little Egypt*," and at another, even to be a Gipsy, was a crime punished with death, and many were hanged "according to the Statute."

The race now may be said to be nearly extinct, and although there is one who is acknowledged to be the King of the Gipsies, still they are not in any way different from the muggers of various villages who shut up their houses in summer, and live in tents or camps, and return to their houses on the approach of winter.

“The Gipsies, wild and wandering race,
Are masters of the sylvan chase;
Beneath the boughs their tents they raise,
Upon the turf their faggots blaze!
In course profusion they prepare
The feast obtain'd,—how, when, and where?
While swarthy forms, with clamour loud,
Around the smoky cauldron crowd.”

—(*Bayley's Gipsy's Haunt.*)

The early records are few in number :

A.D., 1296, Maester Walram, the Parson of Yetholm, swore fealty to King Edward the 1st, at Berwick.

A.D., 1304, Edward arrived at this place, with Earls and Barons.

A.D., 1379, Robert the 2nd granted to Fergus McDougal, the Manor of Yetholm, which Margaret Fraser, his mother, had resigned to him.

———— Robert the 3rd granted to Arch. McDougal, the Barony of Yetholm, the descendents of whom (softened to McDowal) long enjoyed this property.

———— Robert, Duke of Albany, granted to John de Hawden, the lands of Yetholm, which had been resigned by William Hawden, his father.

About A.D., 1400, William de Hawden, the Lord of the Manor, granted to the Monks of Kelso, the right of advowson to the Church of Kirk Yetholm.

Some other scattered notices are to be found in Mr. Jeffrey's book.

Andrew Wauchope, Esq., is the Mareshall and Superior of the Lands of Town Yetholm, and he favoured the Club with his company at dinner. These hereditary offices on the south side at Kirk Yetholm, appertain to the Marquess of Tweeddale.

The party assembled at dinner, at the Inn at Town Yetholm. The five gentlemen proposed at the last meeting were elected, and the following were proposed as Members to be elected at the next meeting, viz: John Richardson, of Pencaitland Cottage, Tranent, Dudley Coutts Marjoribanks, M.P., Scott Dudgeon, of Spylaw, and the Rev. Delaval Knight, of Ford.

It was also announced by Mr. Home that Mr. Witham, of Lartington, an old Member, wished to resign, owing to his removal from the district. This was a disappointment, but as a set off, we had the pleasure of welcoming the return of Dr. Francis Douglas, one of our oldest Members, after a long absence in India.

After dinner the Secretary produced a beautiful specimen of a Gold Noble of Edward the III., which was found at Hazle-ridge, in the parish of Chatton; it was minutely examined by each Member; it is about an inch and a half broad, and very thin, and of a bright yellow colour, and soft.

OBVERSE.

Edward Dei. G. Rex. Ang. z. Fra. Dns Hyb. z. Aqt. The King, armed and crowned, standing in a ship, which has a streamer at the mast head, with St. George's Cross; a naked sword in his right hand, and in his left a shield bearing the Arms of France (*semé-de-lys*) quartered with those of England. On the upper part of the side of the ship are lions passant gardant, towards the left and fleur-de-lis alternately; under these, two tiers of ports, the lower of which has four projecting spikes, placed alternately with the ports.

REVERSE.

IHE: AVTEM: TRANSCIENS: P: MEDIVM
ILLORVM IBAT.

In a double tressure of eight arches with trefoils in the outward angles, a cross fleury voided. Over each limb of the cross a fleur-de-lis. In the quarters the Lion of England under a crown. In the centre a rose of four leaves, pointed with as many trefoils salterwise, including the letter E.

Weight 119½ grains.

These Coins were so beautiful that various fabulous accounts were reported as to the material of which they were made. On the one side was the King's Image, in a ship to notify he was lord of the seas, and on the other "*But Jesus passing through the midst of them, went his way,*" denoting that as he passed invisible, so was the gold made by an invisible and secret art.

Again, the words were considered a charm against thieves. But see a full account of these Coins in Ruding's Annals.

Gold Coins were first issued in 1343.—(Pat. 18 Ed. III. pt. 1, m. 27.)

Mr. George Tate communicated to the Members shortly, an outline of a Geological tour, he had made in this district, which it is hoped will be the subject of a paper to be read at a future meeting, and printed in our transactions.

He also described a tour he had lately made along the line of the Roman Wall, from the Cumberland Border to Wallsend, with peculiar reference to the Geology of the country through which the Wall passed. In many places it is still strongly marked, in one part he counted thirteen courses of masonry.

The whole plan from end to end consists of an outer deep ditch, on the north side of the wall, then the wall itself, and then two inner walls, with towers at intervals. Even where the wall passes through the whinstone, or up and down the steepest hills, still this plan is never varied, the hard rock is quarried out for the ditch, and the great stones so taken out are lying to this day at the base of the hills. So very laborious a work shows the perseverance and determination of the Roman soldiers, to erect such a formidable out-work as would protect their conquests against those northern barbarians, the Picts and Scots of that early age.

The Secretary remarks, "In the walk taken by the Club, the only plant new to the locality was the *Convallaria multiflora*, a plant frequently observed near cultivated grounds, and hence generally set down as a wanderer. The plant, however, was quite as wild as in any of the localities where I have seen it growing. *Habenaria clorantha*, *Gymnadenia conopsea*, *Arenaria rubra*, and several other well known species were found in profusion. I had the day previous found in Learmouth Bog, *Lastrea cristata*, a Fern new to our district. Very few insects were observed *Elaphrus cupreus* was taken by the side of Hoseley Loch and two specimens of *Necrophorus ruspator* were taken from the body of a mole."

The last meeting, of which I have to record the transactions, was held at Cockburnspath, in Berwickshire, on the 30th of

July, and as I was engaged in Court, at the Northumberland Assizes, I could not be present, and the Secretary being abroad, I am indebted to Mr. George Tate, of Alnwick, for the following note of what was transacted there.

There were present, P. J. Selby, Francis Douglas, M.D., David Macbeath, Robert Home, Major Elliott, Patrick Clay, George Tate, Robert Hood, M.D., William Stevenson, William Boyd, Charles Stewart, M.D., and Charles Watson.

Mr. Tate's record is as follows :—

“ Although Cockburnspath has been repeatedly visited by the Club, there was, notwithstanding, a goodly assemblage of Members at this Meeting, attracted partly, doubtless, by the prospect of pleasant intercourse, but, also by the beauty and picturesqueness of the Deans, and the interesting and instructive geological sections along the coast. After Breakfast the Members separated into two parties, one proceeded to explore Dunglass and Pease Deans. The other party consisting of Mr. Hume, Major Elliott, Mr. Stevenson, Mr. Clay, and Mr. Tate, set off in a long cart, the best conveyance which could be had, to visit Fast Castle and Siccar point, passing by the “ Old Tower ” and lingering for awhile on the high bridge across the Pease Dean, admiring the beauty of the deep ravine below, they were jolted onward over a rugged road, and for some distance across a dreary upland moor to Dunlaw, where they left their conveyance, and proceeded on foot to the lonely and sea-beaten ruin of Fast Castle ; which tenantless and roofless stands on a rugged and elevated mass of Greywacke rock, protruding into the sea, from the loftier precipitous cliffs which form the bold and dangerous coast line. Formerly access to it was obtained by a draw-bridge ; now, however, the chasm is partly filled up and the Castle is reached by a narrow causeway. It possesses a few historical associations, but such is the marvellous charm, which the genius of Scott has thrown around it, that it is viewed with most interest, as the *Wolf's Crag* of the *Bride of Lammermuir*. It is rudely but strongly built of Greywacke from the adjoining cliff, with here and there red sand-stone blocks, which had been brought from near Siccar point. The

Building is chiefly quadrangular, but there are remains of a round tower on the north-west corner, and another round tower is seen on the south-east corner, resting on corbels, and projecting over the square ground storey. A small recess in one of the rooms has a simple O. G. arch of an early style, which, with the character of the towers, would refer the erection of the Castle to the fourteenth century.

“More remarkable than the Castle, are the rocks which tower above it. The coast here is desolate enough—wild crags, rugged and bare, rise precipitously to heights varying from 100 to 300 feet ; here and there are grotesque, projecting, and isolated masses and caverns hollowed out by the sea, but an especial interest is given to the scene by the marvellous contortions of the strata which form the lofty cliffs.

“These strata are Greywacke, the upper Cambrian formation of Sedgwick, and lower Silurian of Murchison. They form, excepting where igneous rocks are intruded, the coast from Siccar point to Burnmouth, and run across the country in a westerly direction, having an average width of about ten miles. Doubtless these strata are bent and contorted over the whole district, but the undulations are best observed along the coast, where an extensive cross section is exposed. These contortions consist of great curvatures which are alternately concave and convex upwards, those of the largest size reaching from the top to the bottom of the cliff. Sir James Hall observed sixteen distinct bendings in the course of about six miles. Immediately opposite to Fast Castle, one of these great arches occurs, extending to the top of the cliff where the upper portion of the arch is broken through ; to the south of this folding, the strata are standing perpendicular, or crushed and bent over.

“In presence of impressive phenomena, well calculated to excite curiosity, and which have supplied materials for the speculations of Hutton, Playfair and Hall, and of Sedgwick, Murchison and Lyell, we could not help inquiring into the cause, which had first raised mud, deposited originally as horizontal beds at the bottom of the sea, into a highly inclined and perpendicular position, and then squeezed them into a

series of great contortions and arches. Obviously the strata must have been pressed laterally; and Sir James Hall shewed how similar foldings would be given to layers of clay placed under a weight, when pressed at opposite ends. Still the question remains, what was the power which exercised this pressure? Some Geologists, regarding the effects as too great to have been produced by the action of agencies now working, refer them to a supposed contraction of the earth at a remote era; but this is a mere hypothesis, and not a generalisation—a hypothesis to which indeed there is no necessity to resort here, for when all the various igneous rocks intruded amongst the Greywacke beds are fairly reckoned up, they become the evidences of power equal to the elevation and contortion of the Berwick strata. There is the great mass of the Porphyry of the Cheviot, which has been thrown up since the deposition of the Greywacke beds, and which is seen in connection with them in Northumberland and Roxburghshire; there are the Syenites and Granites of Cockburnslaw, Sten-shiel Hill, and Fassney, the Porphyries of Lamberton, St. Abb's Head, Hallidown, Coldingham Law, and Bemerside; and there are many intruded dikes over the formation, several of which are seen on the banks of Blackadder. When we add to this, that the igneous rocks visible on the surface are in many cases but the narrow terminal points of broader masses beneath, we have indications of volcanic power, capable both of lifting up the Greywacke strata, and of contorting them by the intrusion of masses which, exerting both an upward and lateral pressure, would squeeze yielding beds into a series of great Arches.

“After dinner the Members proposed at the meeting were elected. Mr. William Sharswood, of Philadelphia, was proposed by Mr. Tate, and seconded by Mr. Home. Dr. Hood read a paper describing a Cave in the Sea Cliff, between Eyemouth and Burnmouth; and Mr Tate some notices of the Geology and Archæology of the neighbourhood of Yetholm, and the northern part of the Cheviots.

“Another paper was read, contributed by the Rev. William Procter, A.M., on the Doddington Wells. The paper states

that Doddington is peculiarly favoured with several excellent springs of water, of which the Dod Well and Cuddy's Well are the most important. Both wells issue out of the sandstone of Dod Law, the former yielding 70 gallons, and the latter 24 gallons per minute of soft water, at a temperature of 46 degrees of Fah.; the supply and temperature are the same in winter as in summer. Previously to "the year 1791 the Dod Well was a very beautiful natural fountain, at the base of a prominent freestone rock;" "and from a crevice of the rock above the basin, grew a 'yea pointed' fern (doubtless the *Osmunda regalis*) which was an object of great interest to the villagers, differing, as it did, from the common fern." There was a song current in the village in those days, the burden of which was

"The bonny Dod Well and the Yea pointed fern."

But, adds the writer, "I have been unable as yet to recover any more of the song than that single line; so completely was the fountain of poetry dried up in the village by the ruthless destruction of that which inspired it; for who could sing of the 'Bonny Dod Well' amidst the desecration" to which it was subjected: for in the year 1791 a "heartless Carmichael" quarried away the rock of which the natural fountain was formed, regardless alike of the presiding genius of the springs, and of the feelings of the villagers. Much to the credit of the present Incumbent, a new fountain, through his exertions, was erected in 1846, the cistern being covered over "with solid masonry, in the form of a cross of Calvary; thus substituting an architectural ornament of a Christian character, for the royal fern which had presided over the original fountain for centuries before its demolition."

"Dr. Hood shewed a good specimen of the plate of *Pterichthys major*, from Harelaw quarry, near Chirnside, out of the old red sandstone."

I have now concluded my notes respecting the meetings held since I have been President, and I have only a few more remarks to make.

I should like to see recorded in our proceedings the sizes and localities of remarkable trees, extraordinary springs of

water, appearances of mines and minerals, qualities of stone, and any other interesting matters connected with the district.

The Aquarium is another device of modern times, well worthy the attention of those members who make natural history their study and delight. By it the habits of marine animals may be more correctly ascertained, and the mode in which nature propagates the species of those wonders of the ocean, more clearly made out. You may there trace the Whelk from the merest speck on the side of the glass, until it gradually develops itself as we see it on the sea shore. The same remark applies equally to other marine animals.

The Aquarium also enables the accurate observer of nature to watch, day by day, the growth of the Algæ and various kinds of marine plants, to ascertain their uses for food and otherwise, as well as their fructification, and so to obtain much additional information to that which is already recorded in the valuable publications of Dr. Johnston, either among the proceedings of your Club, or spread over his other independent works.

Thus, a new source of pleasure and instruction is opened to us, another page of the book of nature is turned over for perusal and study, and the lamentations of some of our body, that the Natural History of the district is nearly exhausted, may, I hope, for ever cease to be heard among us.

The young Naturalist cannot do better than take White's History of Selbourne as his model, and note from time to time, the events of the year, such as the arrival and departure of birds, and other interesting facts as will occur to an enquiring mind.

In a hole under the roof of one of my old buildings, at Alnmouth, a party of Starlings build their nests every year. They take flight to some foreign country, and return again in the spring, and they never fail to come direct to the very spot, and again rear their young. How do they know the exact spot to come to, from such distant countries?

The Natural History of the finny tribe is by no means exhausted. A more full account of the salmon, having reference to recent experiments, is very desirable; the causes of their paucity, and the cure for that evil.

With respect to the salmon fry they are brought down the river Tweed in such myriads in the spring of the year, that Berwick Bay is full of them. Ducks, Gulls, and all the aquatic birds are found in vast numbers, feeding upon them, and they are the prey of all the finny tribe. It is matter of surprise to me when so many escape the poacher in the breeding season, that so few return to their own river. Mr. William Paulin, the experienced manager of the Berwick Company's Fisheries, in the Tweed, and who has all his life paid great attention to the habits of the salmon, writes to me as follows :—

“In answer to your enquiry about the salmon fry, I may inform you that their migrating period is from about the middle of April to the end of May, during which they come down the river in immense shoals, but after they got into the sea their history is not so well ascertained. Some contend that in the sea they grew very rapidly, and in a few weeks return to the river as grilises, of five or six pounds weight. I don't believe this, for from experiments that have been made, I am satisfied that they do not return as grilises of the above weight until at least fifteen months after ; but where they go in the meantime there is no satisfactory evidence to shew, except that they must be somewhere in the deep sea, for they are never found in the river again, or on the sea shore, until they appear as grilises. One thing also is certain that a considerable portion of the smolts, on their first entrance into the sea, must become the prey of codfish and other sea-fishes, as well as of birds, which are all found in great numbers about the river mouth at that period of the year, just waiting to devour them.”

In a second letter he says, “The most destructive enemies of the fry when it leaves the river, are the ‘Podlers’ or ‘Saiths,’ and the ‘Sea Gulls or ‘Divers,’ but the former are by far the most numerous, and are exceedingly voracious. Last week a few of our fishermen, with a common salmon net, caught upwards of 300 of these fish in *one haul* ; and on two or three other occasions they have caught large numbers of them, amounting in the whole, I believe, to about 2000. Such of them as were cut up were found to have from six to fifteen

smolts in their stomachs, and when you consider that all these 'Podlers' or 'Saiths' were taken within a very limited space, and in a very short time, you may imagine how vast must be the numbers, and what an immense destruction of the fry must be going on all along the shore, and in the open sea. The 'Podlers' and the 'Sea Gulls' are certainly the greatest destroyers of the fry that come most under observation, but no doubt Cod fish, as well as other fishes, will also have a fair share of them.

"There are, however, one or two points as regards the salmon itself, which I should like to see cleared up. We all believe the salmon to be grilse of the previous year, after it has spawned and become clean again. At the close of the fishing season in October, salmon will average about 16 lbs. weight, and grilses from 7 to 8 lbs. All of them that are caught are more or less full of spawn, and approaching to a mature state, although some are much more advanced than others. We know that both salmon and grilses at that time proceed to the higher parts of the river for the purpose of depositing their spawn and in the months of February, March, April and May following, we find salmon that have spawned, as well as grilses, descending the river again towards the sea, for the purpose, as we presume, of being renovated in their condition. During the same time we occasionally find salmon that have spawned, and Bagot salmon likewise (that is female salmon which are just ready to spawn) coming into the river from the sea. While all this is going forward there is, from the very commencement of the season in February (and when the season commenced so early as the 10th of January it was just the same) a regular supply of *clean* salmon coming daily into the river from the sea, averaging about a pound more in weight than the grilses were at the close of the previous season, but very few old salmon of 16 lbs. weight, in a *clean state*, are ever caught among them. It seems almost certain that these fish cannot have had time to be in the river to spawn as grilses, and to have returned again to the sea and become salmon. The question then arises, where do they come from? If they have not spawned during the winter, then at the close of the

previous season they must have been in a different condition from all the other salmon and grilises that were caught at that time. If they have spawned during the winter, then, since it does not appear to have taken place in the river, it must have been in the sea, but this, I believe, is generally denied to be the case by those who profess to have studied the subject, and it is said that should they even do so, the spawn will not come to life. It may be noticed also, that at the commencement of every fishing season, a great portion of the salmon that are to be caught during that season must, necessarily, be in the sea, for after the net and rod fishing begins, very few of the salmon that are in the river are allowed to escape. It would, therefore, appear that there must be an immense shoal of salmon congregated somewhere in the deep sea, from which detached portions seem gradually to approach towards the shore as the season advances. It is another fact that whenever there is a '*Spate*,' salmon are drawn towards the river, and that those which have no roe in them, and, therefore, cannot be supposed to be coming into the river for the purpose of depositing their spawn, are just as ready to do so in the *spring* and *summer* months, as those which are full of roe, and are ascending the river for spawning purposes at the close of the year.

"I confess that I find all these facts difficult to be reconciled with the general belief that salmon *do* and *can only* spawn in rivers, or if they should spawn in the sea, that the ova must be lost. It may be so, and I am not prepared to offer any other theory upon the subject, but to me it appears doubtful, and I should be very glad to see a reasonable and satisfactory explanation of the circumstances I have referred to."

Again he writes, "With regard to the salmon fry, the ova are generally deposited in the spawning beds in the months of November and December, sometimes later, and come to life about April following. They continue in the river for twelve months longer, growing gradually into what are called '*Parr*,' and are found of various sizes, from two to four inches in length. In April and May of the second year they assume the smolt appearance and make their way towards the sea,

by which time they have grown to five or six inches in length and perhaps two or three ounces in weight. After they leave the river great numbers must become the prey of sea-fish and birds as I have already mentioned, but still large numbers must escape, for in two instances that have come under my own observation, smolts that have been marked one year with silver wires being fixed in them, have been caught fifteen months after as grilses, one weighing $4\frac{1}{2}$ lbs. and another $6\frac{1}{2}$ lbs.

“The old belief was that the salmon ova deposited in November and December, went down to the sea as ‘smolts’ in April and May following, and returned again to the river as ‘grilses’ in July and August, when they had become of six or seven pounds weight; but experiments that have been made of late years show that the growth is by no means so rapid, and that a grilse at the end of the fishing season must be at least two and a half years old.”

I recommend this matter to the attentive consideration of those members of our Club who make natural history their study and delight; for the supply of salmon to our rivers depends much on the knowledge of the habits of this fish, and to a correct legislation on the subject.

After much investigation, and a great contest in Parliament, a new Act has been obtained to regulate the salmon fisheries in the Tweed and its tributaries, from which I note the following facts.

It commences from the Royal Assent (17th of August, 1857.)

The leading feature is the abolishing of all fixed nets.

Salmon to be taken only by the rod and by the wear shot or sweep net, and no such net to be worked within 30 yards of another.

All natural obstructions and cairns to be removed.

The weekly close time is from six on Saturday evening, to six on Monday morning, throughout the season, for net and rod alike.

The annual close time begins on the 1st of October for nets, and the 15th of October for rods, and ends on the 1st of March, for both nets and rods.

Leisters and Spears are abolished.

No foul fish are to be killed at any season, by any means.

The use of cleeks or landing hooks by rod fishers are prohibited till after the 1st of June, by which time the kelts have generally left the river.

If the evidence taken on this investigation is printed, much valuable information will be found in reference to the habits of the salmon. In the absence of it I refer you to the first and second reports of Mr. Kennedy's Committee, taken in the years 1824 and 1825, where the best information is to be obtained on this interesting subject.

In a paper read at the late meeting of the British Association, by *Sir William Jardine*, one of our Members, on the progress of the artificial propagation of salmon in the Tay, Sir William stated that it has been found that one of the worst enemies of the salmon ova in the breeding beds is the larvæ of the May-fly, a creature, which in its turn was preyed upon by the common river trout. Now, the practice had prevailed in rivers preserved for salmon fishing of destroying trout, though this fact showed that the numbers of trouts ought not to be unduly diminished, as by keeping down the May-fly they aided in propagating salmon. As an illustration of this law of nature, he pointed out that in parts of the country in which hawks had been ruthlessly extirpated, with the object of encouraging the head of game, wood-pigeons had increased to such an extent as to have become a positive nuisance and most injurious to the farmer; and he showed the danger incurred by unduly interfering with the balance established by nature among wild animals.

In addition to the remarks of Dr. Hood contained in his interesting paper on Coldingham Priory, I may add, that on Tuesday, the 5th of May, 1857, the workmen discovered the tombs of two of the Priors.

One is of Ernald the Prior, from 1202 to 1208, the coffin lid is six and a half feet long, thirty inches wide at the head, and twenty-two at the feet, and one foot in thickness, and is inscribed thus:—

ERNALDUS: PRIOR

His body was found underneath, sewed in leather, his shoes on his feet, and a hazel rod about thirty inches long upon his breast.

The other is that of Radulf, who was Prior for one year, A.D., 1209. His body was wrapped up in a course kind of woollen cloth, the inscription on the lid is

RADULPHUS: PRIOR: DE: COLDINGHAM:

The spot where this discovery took place is where the centre tower stood between the north and south transepts, and the coffin lids are now there replaced, but a little exposed above the surface of the ground.

Dr. Hood refers to three slabs, but there are now four; on each of them is a cross, the full size of the stone, and on one is a cock and a sword, on another a rude hunting horn and a sword, the other two have neither sword nor device simply the cross. The four slabs are now set up against the west side of the west wall of the south transept.

How many centuries have passed away, and what stirring events have occurred since the inmates of these tombs were consigned to their last resting places—sweetly the poet of the Border sings

“How sleep the dead in yon churchyard,
Where chequering moonbeams purely fall?
How sleep the dead beneath the sward?
Calmly—softly—sweetly all.
In mute companionship they lie,
No hearts that ache, no eyes that weep,
Pain, sickness, trouble, come not nigh
The beds of those that yonder sleep.”—(*Storey*.)

Before I conclude, I must correct a misprint in my communication relating to the kind of masonry of the old Nunnery buildings, discovered at Coldingham Priory. The plaster was not a foot thick on the outside, as is there printed; but, an inch only.—(*Transactions*, 3rd vol. p. 213.)

Our meetings have always been pleasant recreations, and I trust they will so continue; still we feel the loss and absence of Dr. Johnston; his pleasant discourses—his anecdotes and the varied information, ever readily communicated. I had

the melancholy satisfaction of sauntering with him for several hours at Chirnside, at the last meeting, but one, of our Club, which he ever attended, and my note of that meeting will be found at vol. 3, p. 211, of our transactions. He was indeed the heart and soul of the Club; he rests in the silent tomb, like the priors and warriors of old, before alluded to; yet we have the pleasing reflection that his memory is respected by the surviving members, and his works will not easily be forgotten. Again, I must resort to the poet:—

“ Forget not the dead, who have loved, who have left us,
 Who bend o’er us now from their bright homes above;
 But believe, never doubt, that the God who bereft us,
 Permits them to mingle with friends they still love.

Repeat their fond words—all their noble deeds cherish,
 Speak pleasantly of them who left us in tears;
 From our lips their dear names other joys should not perish,
 While time bears our feet, through the valley of years.

Yea, forget not the dead, who are ever more nigh us,
 Still floating sometimes round our dream-haunted bed;
 In the loneliest hour, in the crowd they are by us,
 Forget not the dead—oh, forget not the dead!

I must now conclude my address; I fear much too long and tedious, but I trust the labours of future Presidents will make up for my deficiencies, and gather up what I have left untold.

I append a list of the Presidents since the commencement of the Club, and the times and places where their annual addresses have been delivered.

ANNUAL ADDRESSES

DELIVERED BY THE PRESIDENTS:—

Name. -	Where delivered.	When delivered.
Dr. Johnston,	Coldstream,	19th September, 1832.
Rev. A. Baird,	Dunse, ...	18th September, 1833.
P. J. Selby, Esq.,	Twizel House, ...	17th September, 1834.
Robert Embleton,	Biteabout,	16th September, 1835.
Sir William Jardine,	Yetholm,	21st September, 1835.
Rev. John Baird,	Norham,	20th September, 1837.
Dr. Clarke,	Ford,	19th September, 1838.

Rev. Thomas Knight, Ford,	18th September, 1839.
Rev. T. Riddell, .....Holy Island,.....	29th September, 1840.
F. Douglas, M.D.,....Kelso,	15th September, 1841.
G. Darling, Esq., .....Lowick,	28th September, 1842.
Dr. Johnston,.....Ford,	20th September, 1843.
P. J. Selby, Esq., ....Heather House,	18th September, 1844.
Rev. J. D. Clark, ....Dunsdale,	3rd September, 1845.
R. Embleton, Esq., Chatton,	16th September, 1846.
Dr. Clarke,	Alnwick, .....22nd September, 1847.
J. S. D. Selby, Esq., Belford,	13th September, 1848.
Capt. Carpenter, .....Etal,	12th September, 1849.
Wm. Broderick, Esq., Warkworth,	18th September, 1850.
Dr. Gilly,	Grant's House,.. 3rd September, 1851.
Robert Home, Esq., Newtown,	8th September, 1852.
Geo. Tate, F.G.S.,...Embleton,	7th September, 1853.
Rev. George Rooke, Bamburgh,.....	13th September, 1854.
R. Embleton, Esq., Berwick,.....	30th January, 1856.
Ditto,	Belford Hall, ....29th October, 1856.
W. Dickson, F.A.S., Alnmouth,	24th September, 1857.

Since the preceding part of this address was printed, I find it necessary to correct the following errors :

In page 6 I have described the New Church at Alnwick as *Early English* ; I should be more correct if I had stated the style of architecture to belong to the *decorated period*.

Page 5, line 29, insert " as " before the word " parcel."

Page 34, line 10 from the bottom, for *lovile* read "*lovite*."

Page 40, line 9 from the bottom, insert " last " before the word meeting.

And lastly, I think we ought to have the portrait of Dr. Johnston, the founder of our Club, prefixed to the next volume. A slight sketch in lithograph, with a specimen of his hand writing under it, would be most satisfactory.

WM. DICKSON.

Alnmouth,

24th September, 1857.

BERWICKSHIRE NATURALISTS' CLUB.

LIST OF MEMBERS.

	Date of Admission.
1. Rev. John Baird, of Yetholm	Sept. 22, 1831.
2. William Baird, M.D., British Museum, London	Sept. 22, 1831.
3. Robert Dundas Thompson, M.D., 11, Marlborough Hill, St. John's Wood, London	Sept. 22, 1831.
4. Robert C. Embleton, of Beadnell	Sept. 22, 1831.
5. Prideaux J. Selby, of Twizel House, Belford	April 20, 1832.
6. Rev. Joseph W. Barnes, Vicar of Kendal	June 18, 1832.
7. Sir William Jardine, Bart., of Jardine Hall, Dumfries-shire	Sept. 19, 1832.
8. George C. Carpenter, of The Cottage, Ford	April 16, 1833.
9. Rev. Thomas Knight, The Rectory, Ford	April 16, 1833.
10. Henry Geo. C. Clarke, M.D., Berwick-upon-Tweed	April 16, 1833.
11. Francis Douglas, M.D., Kelso	July 30, 1834.
12. Admiral Mitford, of Hunmanby, Scarborough	Sept. 17, 1834.
13. Rev. Henry Parker, Rector of Ilderton	Sept. 17, 1834.
14. J. S. Donaldson Selby, of Holy Island	May 6, 1835.
15. Frederick J. W. Collingwood, of Glanton Pyke	May 6, 1840.
16. Jonathan Melrose, W.S., of Coldstream	May 6, 1840.
17. Rev. John Dixon Clark, The Hall, Belford	Dec. 16, 1840.
18. David Macbeath, of Berwick-upon-Tweed	Dec. 16, 1840.
19. John Boyd, of Cherry-Trees, Yetholm	Sept. 18, 1841.
20. Robert Home, of Berwick-upon-Tweed	June 15, 1842.
21. Sir Thomas Tancred, Bart., Tillington, Petworth, Essex	Sept. 23, 1842.
22. Charles Wilson, M.D., 43, Moray Place, Edinburgh	July 26, 1843.
23. James Tait, of Edenside, Kelso	July 26, 1843.
24. James Douglas of the Commercial Bank, Kelso	July 26, 1843.
25. William Dickson, F.A.S., of Whitecross, Berwickshire	Sept. 20, 1843.
26. William Broderick, of Ilfracombe, North Devon	Sept. 20, 1843.
27. John Turnbull, of 16, Thistle Street, Edinburgh	Sept. 20, 1843.
28. Rev. George Walker, of Belford	Sept. 20, 1843.
29. Ralph Carr, of Hedgeley, Alnwick	Oct. 18, 1843.
30. Rev. J. C. Atkinson, Danby, Gisborough, Yorkshire	May 1, 1844.
31. Rev. William Ritchie, Berwick-upon-Tweed	May 7, 1845.
32. Rev. Matthew Burrell, of Chatton	Sept. 3, 1845.
33. Rev. George Rooke, of Embleton	Sept. 3, 1845.
34. Charles Selby, of Earle, Wooler	Sept. 3, 1845.
35. Henry Gregson, of Lowlin	May 3, 1846.
36. Rev. Hugh Evans, Scremerston	May 3, 1846.
37. Rev. William Lamb, of Ednam, Kelso	June 3, 1846.
38. William Stevenson, of Berwick-upon-Tweed	June 3, 1846.
39. Major Elliott, Berwick-upon-Tweed	May 5, 1847.
40. Patrick Clay, of Berwick-upon-Tweed	May 5, 1847.
41. George Tate, F.G.S., Alnwick	June 16, 1847.
42. The Right Hon. the Earl of Home, Hirsel, Coldstream	Oct. 20, 1847.
43. David Milne Home, of Milne Garden, Coldstream	Oct. 20, 1847.
44. Rev. L. Shafto Orde, of Shorestone, Bamburgh	Oct. 20, 1847.
45. George Turnbull, of Abbey St. Bathans	Oct. 20, 1847.
46. James Renton, of Highlaws, Eyemouth	Oct. 20, 1847.
47. R. Hood, M.D., 5, Salisbury-street, Newington, Edinburgh	May 3, 1848.
48. Rev. Hamlet Clarke, Sheep-street, Northampton	July 26, 1848.
49. Rev. George Carpenter, The Cottage, Ford	July 26, 1848.
50. Rev. Samuel Arnott Fyler, Cornhill	June 25, 1849.
51. Rev. W. Darnell, Bamburgh	July 25, 1849.

52. Henry Stephens, of Redbraes Cottage, Bonnington Edinburgh	Sept. 12, 1849.
53. Francis S. Cahill, M.D., of Berwick-upon-Tweed	Oct. 18, 1849.
54. W. H. Logan, of Berwick-upon-Tweed	May 1, 1850.
55. John Church, of Bell's Hill, Belford	July 24, 1850.
56. William Gray, of East Bolton, Alnwick	July 24, 1850.
57. W. Smellie Watson, of Forth-street, Edinburgh	Sept. 18, 1850.
58. John Craster, of Craster Tower	Sept. 18, 1850.
59. Rev. Wm. Rigge, of Anick, Hexham	May 7, 1851.
60. Hugh Taylor, of Alnwick and Earsdon	Oct. 15, 1851.
61. Wm. Forster, of Alnwick	Oct. 15, 1851.
62. Wm. Dickson, Jun., of Alnwick	Oct. 15, 1851.
63. Sir John Marjoribanks, Bart., Lees	June 30, 1852.
64. Matthew Turnbull, M.D., Coldstream	June 30, 1852.
65. Rev. George Selby Thompson, Alnham	June 30, 1852.
66. Hon. Admiral Sir Frederick Grey, Howick Grange	June 30, 1852.
67. George R. Tate, M.D., Alnwick	Sept. 8, 1852.
68. William Stevenson, of Dunse	Sept. 7, 1853.
69. James Wilson, M.D., Berwick	Oct. 12, 1853.
70. William Boyd, of Cherry Trees, Yetholm	Oct. 12, 1853.
71. William Marjoribanks, of Coldstream	June 21, 1854.
72. George Douglas, M.D., Kelso	June 21, 1854.
73. Charles Stuart, M.D., Chirnside	Aug. 16, 1854.
74. Rev. F. R. Simpson, North Sunderland	Aug. 16, 1854.
75. Rev. Mr. West, Westbury, Wilts	Oct. 25, 1854.
76. Rev. George Hans Hamilton, Vicar of Berwick	Oct. 25, 1854.
77. Thomas Sopwith, of Allenheads, Hexham	May 9, 1855.
78. Charles Rea, of Doddington, Wooler	June 20, 1855.
79. George Culley, of Fowberry Tower	June 20, 1855.
80. Rev. Edward Sandys Lumsdaine, Up Hardres, Cum Stalling, Canterbury	July 18, 1855.
81. Ralph Galilee Huggup, of Shorestone, Bamburgh	July 18, 1855.
82. Rev. Charles Thorp, Vicar of Ellingham	Jan. 31, 1856.
83. Rev. T. S. Goldie, Coldstream	Jan. 25, 1856.
84. John Church, Jun., of Bell's Hill	Oct. 29, 1856.
85. Charles Watson, of Dunse	Oct. 29, 1856.
86. Capt. Selby, R.N., Belle Vue, Alnwick	Oct. 29, 1856.
87. Lieut. Patrick Johnston, R.N., Berwick	Oct. 29, 1856.
88. Rev. Thomas Leishman, Linton, Berwickshire	Oct. 29, 1856.
89. George Hughes, Jun., of Middleton, Wooler	Oct. 29, 1856.
90. John Charles Langlands, of Bewick	June 25, 1857.
91. The Venerable, The Archdeacon Thorpe, Durham	June 25, 1857.
92. Frederick Wilson, of Alnwick Castle	June 25, 1857.
93. Thomas Scott, of Broomehouse	June 29, 1857.
94. James Gray, of Kimmerston	June 29, 1857.
95. John Richardson, Pitcaitland Cottage, Tranent	July 30, 1857.
96. Dudley Coutts Marjoribanks, M.P., London	July 30, 1857.
97. Scott Dudgeon, of Spylaw	July 30, 1857.
98. The Rev. Delaval Knight, of Ford	July 30, 1857.

EXTRAORDINARY MEMBERS.

Mrs. Dr. Johnston, Berwick.

Miss Bell, Coldstream.

Miss Hunter, Anton's Hill.

Notes, respecting a Chapel at Old Bewick, in the Parish of Eglington, in Northumberland. Communicated by PHILIP C. HARDWICK, Esq., in a letter to John Charles Langlands, Esq. Read by the President, at the meeting at Chatton, on the 28th of May, 1857.

Russell Square, 7th January, 1851.

My dear Sir,

The little half-ruined Church of *Bewick*, is one of the most interesting architectural remains in the north of England:—its history; the locality in which it is placed; its own intrinsic architectural beauty; all give it claims on the attention of those who are anxious to preserve memorials of English history and antiquities.

If you remember I expressed to you my opinion after an examination of the building, that the nave and chancel were built about the year 1110, and in this I am confirmed by Mr. Raine, who, since my visit to the Church, has very kindly sent me some valuable notices of its history. The ville of *Bewick* appears to have been given to *Tinmouth*, a Cell of the Monastery of St. Albans, by *Matilda*, daughter of *Malcolm*, King of *Scotland*, and first wife of our *Henry I.* She was married in 1100, and died in 1118. The grant was made before the year 1107, about which time the Monks became possessed of the neighbouring Church of *Eglington* by the gift of *Winnoc* the hunter; in all probability the works were begun immediately afterwards by the Monks of *Tinmouth*. I am inclined to think that the apse is the work of an *earlier* period, partly from the fact of the straight joint in the wall at the junction of the chancel and the apse, from which one may fairly infer that these two portions of the Church were built at different times, and partly from the character of the windows. The circumstance that Mr. Raine has communicated to me that *Gaufrid de Gorham*, Abbot of St. Albans (1119–1146) leased the lands of *Eglington* and *Bewick*, to *Cospatrick*, son of *Cospatrick*, formerly *Earl of Northumberland*, and in the deed no mention is made of a Church at *Bewick*, though there is of one at *Eglington*, does not shake my confidence in the date that an examination of the building itself, induced me to assign to it.

The plan of this Church is of the Romanesque type that prevailed in the north of Europe; it consists of a nave, a chancel, and sacrarium in the form of an apse, with arches forming a constructional separation between each of the three divisions. There are south doors in the nave and chancel; a large aperture on the north side of the nave, probably indicates the place of a north door. On the south side of the nave are the remains of a window, which is partly destroyed by an insertion of a later date, probably in the year 1695, when the Church was roofed, and fitted up for the celebration of Divine Service. The remains of a south porch exist, but the walls consist only of rough masonry. There is no moulded work to mark the date, though it is evidently a subsequent erection to the Church, and judging from the plan, I think very probably is of the time of Edward II. There are three small windows in the apse, all partly mutilated.

On the south side is an insertion of the time of Edward II., and at the same period apparently were added two buttresses, which have been ingeniously, though rudely, attached to the circular walls of the apse, and an attempt made to make the external face of the walls, as far as possible, straight instead of circular above a certain level. The apse is domed with a rubble vault, which from want of some external covering is fast falling into irretrievable decay. A few monumental gravestones marked with the half obliterated incised cross, and sometimes with the badge of the profession of him who reposed beneath, lie scattered about. Two have been used to form part of the chancel steps. On a large slab in the Churchyard is this inscription:—

THIS CHAPELL REPAIRED AT THE
CHARGE OF RALPH WILLAMSON
ESQR ANNO DO 1695.

So completely has that good work been destroyed during the last 80 years, that this is the only monument now left to record it.

I may here mention that the cap of the north pier of the chancel arch is ornamented in a similar way to some of those in the Chapel in the crypt of the Castle at Durham.

Picturesque and beautiful as this Church is, even in the half-ruined state to which long years of neglect have reduced it; yet I cannot but deeply lament that it should be suffered to remain exposed to irreparable injury from the weather, and from mischievous or careless persons, who have already carried away much of the fallen masonry, and I cannot too strongly urge upon all those who are from any cause interested

in its preservation to commence the work of restoring it as soon as possible.

I know that occasionally it happens that the destruction of some of the most interesting portions of a work of great antiquity are involved in its restoration, and a choice has to be made between the entire loss of such parts as cannot be repaired, or the loss of the whole building by decay. All who venerate ancient memorials know how difficult it is to decide which course to follow, but it fortunately happens in this case, that so far from the destruction of any one portion of the Church, a skilful restorer, and one who took a real interest in the work, would be able to replace every stone that has fallen and is still left on the ground; and in point of fact very little new material besides common walling stones would be required to complete the work. The quality of the stone is excellent, and unless too long postponed the progress of decay may be stayed, and the Church preserved both as an interesting monument and useful building for many centuries. The walls and arches that are still standing are in a perfectly secure condition, and the only part that need be positively taken down is the north west angle of the nave. A piece of masonry, by the bye, I think of a later date than the other part of the nave. Very probably it would be found necessary to remove the vault over the apse, and the arch that separates it from the chancel, but the stones could all be replaced, and nothing ought to be done without first placing proper centrings under each.

The Edward II. window in the apse so completely spoils the arrangement of the windows, and is of so little interest in itself, that it would be better removed and the original window restored, but it would be as well to leave the buttresses, as I mentioned before, they are curiously constructed, and now assist to strengthen the apse. Whether there would be any use in once more restoring this beautiful little work to its original purpose, and making it again fit for the service of God, or whether if restored it would only be valuable as a monument of the art of past times; its preservation in an age like this, when so many ancient memorials are unavoidably perishing, would be a labour deserving the gratitude of the present and future generations of all those interested in archæological pursuits.

For the following notes I am indebted to *Mr. Raine*.

The dedication is to the *Holy Trinity*.

Matilda, the first wife of *Henry I.*, of *England*, and daughter of *Malcolm*, *King of Scotland*, gave to the monastery

of *St. Albans*, and to *Tinmouth*, a cell of that monastery, the ville of *Bewick*.

She was married to *Henry* in 1100, and died in 1118, and the above grant was made before the year 1107, the Monks having acquired about that year the Church of *Eglingham*, by the gift of *Winnoe* the hunter. The Chapel of *Bewick* was in all probability begun to be built immediately afterwards, by the Monks of *Tinmouth*.

Gaufrid de Gorham, Abbot of *St. Albans* (1119–1146) leases to *Cospatrick*, son of *Cospatrick*, formerly Earl of *Northumberland*, and to his son *Adam*, formerly called *Waldief*, the land of *Archil Turrel*, called *Bewick*, and the land of *Eglingham*, rent £4. Conditions very curious. —(*V. Charter at Durham.*)

The Church at *Eglingham* is mentioned in the deed, but no mention is made of a chapel at *Bewick*. 24 Edward I. *Thomas* and *Alexander*, clerks of *Bewick*, occur in a subsidy roll.

1189, *Richard I.*, in the first year of his reign, confirms to the Monks of *Tynemouth* and *St. Albans*, *inter alia* the Church of *Bewyk*.

Bewick must have had at one time a great population. *Henry III.* granted to it a weekly market, and fairs at stated times in the year.

When *Matilda* gave *Bewick* to *St. Albans*, *Northumberland* was a fief of *Scotland*, and in all probability it (*Bewick*) was part of her dower.

She gave under the same right the church of *Carham* to the Monks of *Durham*. Her charter of the latter, with a gallant seal, is preserved at *Durham*.

The foundations of an old peel *Castle* are yet to be traced at the side of the high road, passing through *Bewick*.

19 Mar. 1577–8, *Bewicke*, offic' dni contra *Johem Rustall*, &c.

That the rode loft is not cleane taken downe. —(*Court Book, Durham.*)

Believe me to be,

Yours very faithfully,

P. C. HARDWICK.

J. C. Langlands, Esq.

PROCEEDINGS
OF THE
BERWICKSHIRE NATURALISTS' CLUB.

The Annual Address, delivered at Norham, on the 22nd of September, 1858. By the REV. WILLIAM DARNELL, M.A. President for the year.

GENTLEMEN,

So many topics of local and general interest have been exhausted by my able Predecessors in this chair, and in the various contributions which grace our annals, that in confining myself to a recapitulation of our proceedings during the past year, coupled with such observations as the occasion seems to suggest, I shall best consult the dignity of the Club, and my own feeling of inability to fulfil the task assigned to me as your President. To proceed then at once, *in medias res*:

Our anniversary meeting was held at ALNMOUTH, on Thursday, the 24th September, 1857. The members present were, Messrs. P. J. Selby, Robert Home, Revds. J. D. Clark, George Walker, L. S. Orde, F. R. Simpson, Wm. Darnell, G. S. Thomson, G. H. Hamilton, Charles Thorp, Dr. G. R. Tate, Messrs. J. Church, William Dickson, jun., Capt. Geo.

Selby, John Church, jun., George Tate, and J. C. Langlands, the President and Secretary; and as visitors, the Revds. William Procter and C. Dowson, Messrs. William S. Church, Patrick Thorp Dickson, and Thomas Tate of Hastings.

The day was particularly fine, and after breakfast at the Red Lion, the members proceeded to the Church Hill, Amble, and Warkworth. It is not necessary to say much upon the subject of the Church Hill or of Alnmouth, for its history is pretty well told already by our late President, Mr. Dickson, in his "Four Chapters from the History of Alnmouth," which he published in 1852, for the perusal of the Archæological Institute of Great Britain, at their meeting at Newcastle-upon-Tyne, in that year. One thing may be noted, that it is there proved that in the old church of Alnmouth was held the Synod A.D. 684, at which St. Cuthbert was chosen Bishop of Lindisfarne. In the year 1856-7, a bridge was built over the river Aln, and a new road made at each end by which Alnmouth is brought within a mile of the Bilton station on the North Eastern Railway, a ready access obtained to and from Alnwick, and a great boon conferred on the inhabitants of both towns.

From the Church Hill the party proceeded to Warkworth, and here again all that can be said of the Hermitage, the Castle, and Church has been the frequent theme of the historian or the poet. The Castle and Hermitage are still the chief points of attraction, and Warkworth is still, as of yore, "proud of Percy's name." The present Duke of Northumberland has recently restored two apartments in the Castle, and, as might be expected, in excellent taste. The break-water harbour and works at Amble, at the mouth of the Coquet, were next examined by the Club. The ancient history of this place will be found in the elaborate volumes of Mr. Sidney Gibson, F.S.A., relating to the history of Tynemouth, Amble having been part of the possessions of that religious establishment. After a pleasant walk along the shore, and by the sea-banks, the party again reached head quarters in time for dinner. After dinner, the minutes of the last meeting were read. The Rev. William Darnell was chosen President

for the year, and Mr. W. Sharswood, of Philadelphia, and Mr. Thomas Tate, of Hastings, were elected members. The following were severally proposed and seconded for election at the next meeting, to be held at Berwick-on-Tweed, on the 28th of October,—the Rev. John Woodham Dunn, Vicar of Warkworth, the Rev. William Procter, Incumbent of Doddington, Patrick Thorp Dickson, of Alnwick, Thomas Young Grete, of Norham, and the Rev. William Cumby, Incumbent of Beadnell. A paper was read by the President, Mr. Dickson, on the Marsh Samphire (*Salicornia herbacea*) which grows in great abundance at Alnmouth. Dr. Embleton exhibited a beautiful specimen of a gold quarter noble of Edward III., found at Dunstanburgh Castle. A nugget of fine gold from the Ballarat diggings, the same colour as the above coin, and weighing about an ounce, was exhibited by the President; also a piece of coarse stone interspersed with grains of sparkling gold, which is extracted by crushing and melting. A fine specimen of a fossil shell with its matrix, from Lord Grey's quarry at Hawkhill, was also shewn, which Mr. Tate pronounced to be "*Productus giganteus*," a characteristic organism of the mountain limestone formation. The Rev. J. D. Clark exhibited a pair of curious spurs, the particulars of which are to appear amongst our records. A specimen of a locust (*Locusta migratoria*) taken at Belford, was also shewn by Mr. Clark. The President then delivered his address, which was a most elaborate and interesting document. This concluded the proceedings of a day diversified with abundance of recreation and fresh air, and combined with some natural history and antique lore.

On the 28th October, the Club met as usual at BERWICK. It was a bright Autumnal day. After breakfast at the Red Lion, at which were present, the Rev. J. D. Clark, Messrs. Home, Clay, Boyd, Major Elliott, Lieut. Johnston, Dr. Clarke, Dr. Embleton, the Seceretary, and the Rev. William Darnell, President. We were joined by the Vicar of Berwick, who conducted us to the Parish Church, the recent restoration of which must be an object of interest to all who

remember its previous condition and can appreciate ecclesiastical order and propriety. The various points of interest in the fabric, and some beautiful medallions of stained glass were minutely examined and described on the spot by the Vicar. On leaving the Church, we visited in the Church-Yard, with mournful interest, the last resting place of him who gave to our Club "a local habitation and a name." From thence we were guided to the site of the new Church of St. Mary, the foundation stone of which had been laid a few days before by the Bishop of the Diocese. The cemetery, the pier, the old fortifications, and the sea-banks comprised the extent of the day's ramble, and at dinner we sat down, fifteen in number, Capt. Carpenter, Mr. Langlands, Dr. F. Douglas, Mr. Logan, and the Rev. Thomas Procter, a visitor, having joined the party. A vacant chair indicated the absence of one who had filled it well in the morning and had since beat a retreat. After dinner Captain Carpenter exhibited several cases of Butterflies and Insects, chiefly collected by himself. An antique vase and two keys, found in digging the foundations of the new Church, were exhibited by the Vicar of Berwick. The meetings for the following year were fixed to take place at Beadnell, Earlston, Greenlaw, and Norham. The members proposed at the last meeting were duly elected, and the following new members proposed,—W. Sherwin, Esq., Barmoor Castle, the Rev. Thomas Procter and the Rev. Shepley Watson Watson, of Berwick, Matthew Culley, Esq., of Coupland Castle, the Rev. James Turnbull, of Graden, and Mr. John Clay, of Berwick.

The first meeting of the year was held at BEADNELL, on the 27th May. The morning was unpropitious, but after a sumptuous breakfast at Dr. Embleton's, the day cleared up, a boat was in readiness, and a visit to the Farne Islands was determined upon by the majority of the members. Others visited the ruins of the old Chapel on the point, and examined the geological strata of the coast, under the guidance and direction of Mr. Tate. At dinner which, from want of accommodation in the Inn, the Secretary had kindly ordered to

be laid in his own house, were assembled, the Rev. J. D. Clark, William Dickson, J. C. Langlands, P. T. Dickson, J. and W. Boyd, G. Hughes, G. Tate, Revds. W. Cumby, C. Dowson, C. Thorp, and F. R. Simpson, and the Secretary and President ; Dr. Robson, Dr. Marshall, and Mr. Graham as visitors. After dinner Mr. Dickson read a paper on the ancient Font of the Parish Church of Rothbury, of which he exhibited a drawing. A paper on the prior existence of the Beaver (*Castor Fiber*) in Scotland, from the pen of Dr. Charles Wilson, and some observations on the habits of the Common Cowry (*Cypræa europæa*) were read by the Secretary. Dr. Robson, of Belford, and Dr. Marshall, of Annstead, were proposed as members, and the election of the members proposed at the last meeting was confirmed.

The next meeting of the Club was at EARLSTON, on June 24th, and was attended by only three members,—Dr. Geo. Douglas, Mr. William Boyd, and the Secretary. The Rev. Mr. Swan, of Smailholme, and his brother, favoured the members with their company as visitors. A sumptuous breakfast and dinner had been prepared in anticipation of a large gathering. The day was beautiful, and the haughs of Leader as enticing as of yore, and the rich golden flowers of the “bonnie broom” of Cowdenknows added greatly to the beauty of the scenery. Thomas the Rhymer, or Thomas of Ercildown, the ancient name of the Parish, was born here, in the thirteenth century, and there is still a fragment left of the Rhymer’s Tower. Several insects were captured, and amongst the plants observed may be mentioned, *Mentha viridis*, *Lepidium Smithii*, *Geum intermedium* in both states, and *Rumex sanguineus*. The Church of Earlston is modern. It was erected in 1786, displacing the ancient structure. Its registers date from 1694. The Parish is not in general mountainous, though there is one hill to the south of the town 1000 feet above the level of the sea, on which there is said to have been a Roman encampment.

On the 29th July, the Club met at GREENLAW. The day was most favourable, bright and with a cool air. The major-

ity of the members; under the guidance of the Rev. Mr. Walker, the Minister of the Parish, proceeded up the valley of the Blackadder, which divides the Parish into two parts, the moor part, from the more cultivated land. They admired the dark grove of fir trees on the opposite bank of the stream, and the perpendicular cliffs above the river, called "Thomas's Grave," the common name of the place, but the origin lost in obscurity. Advancing forward, they came to a large mound called the "King's Grave," about which there is a legendary tale, which Mr. Walker has kindly undertaken to make us acquainted with hereafter. On the opposite side of the river, the spot was pointed out where, a few years ago, some gold nobles of Edward III. were found, now in the possession of the Lord of Marchmont. An encampment, called the "Black Castle Ring," very perfect, situated on the high grounds, was the next object of interest. On three sides there is an outer ditch, then a high dyke of earth, then a wide fosse, and then again an inner dyke—a large flat piece of rich grass ground forming the centre. On the other side is a broken bank, very precipitous, 100 feet and more above the river, from which the camp was quite inaccessible. Here the stream is formed of two branches, the Blackadder running from the east, the Fawngrass more from the west and south. The party followed the course of the latter, but diverging across the moors to view the extraordinary mounds called the Kames. Nine mounds are here found of porphyry gravel, smoothed by the action of the water and laid up in a huge ridge. They can be traced for eight miles in length. Mr. Stevenson has kindly undertaken to give us a paper on the origin of these mounds. Henolt's Dyke and some other places of interest were left to be visited on a future occasion. Another party crossed over the southern moor and passing by old Greenlaw, and Howlaw Rigg, inspected the ruins of Home Castle, the ancient stronghold of that powerful family. Towards the hour appointed for dinner the members might be seen straggling into the town from various quarters. The County-town was all alive, the courts being open, and with difficulty we procured a dinner at the Inn. The members

present on this occasion were as follows: The Rev. John Baird, Rev. J. D. Clark, D. Macbeath, William Dickson, Rev. W. Lamb, P. Clay, W. J. Watson, W. Stevenson, Dr. C. Stuart, Rev. Thomas Leishman, P. T. Dickson, and the President. The Rev. Nicholas Darnell of Edgbaston, and the Rev. Mr. Walker, of Greenlaw, favoured the Club with their company as visitors. After dinner the following members were proposed, the Rev. Mr. Walker, of Greenlaw, the Rev. Robert Kirwood, of Bamburgh, and Mr. John Crooke, of South Sunderland. The plants observed during the walk were, *Triglochin palustre*, *Arbutus uva-ursi*, and *Pinguicula vulgaris*. A motion, submitted to the meeting by the President, to the effect that a sum not exceeding twenty shillings should be devoted from the funds of the society towards the expenses of each meeting held during the year, met with general approval.

GENTLEMEN,—I have now passed in review, and as concisely as the subject matter would admit, our annual calendar of operations. If we have not added much to the contributions of science in general, we have at least made some individual acquisitions of knowledge sufficient to repay us amply for the time we have devoted to such pursuits. Few indeed of us, with avocations of various kinds, demanding all our energy and care, are able to bestow the attention we would wish on so engrossing a study as the works of nature. But if the highest flights of philosophy and science shrink into nothing when we bring them into competition with the wisdom of Him

“————— the kingly sage, whose restless mind
Through nature's mazes wandered unconfin'd;
Who every bird, and beast, and insect knew,
And spake of every plant that quaffs the dew :”

we may well be content to follow at a humble distance in our sphere of labour, accumulating knowledge gradually, sporting, as it were, with philosophy, and dimly realizing the extent and variety of its treasures. And now, in bringing these remarks to a close, I must not omit to notice the genial weather with which we have been favoured by a bountiful

Providence during the successive seasons of the year. The past harvest betokens abundance and plenty, and the Autumn promise is all that could be desired. It is stated that the potato crop has suffered in many parts from that mysterious disease with which it has been attacked for some years past. The appearance of the comet too, so plainly visible to the naked eye at nightfall, is a phenomenon to be recorded in our pages. We may number amongst our associates some whose knowledge of astronomy may tempt them to dilate on the peculiar characteristics of these heavenly bodies. It now only remains for me to wish, which I do in all sincerity, that the measure of success which has hitherto been accorded to the Club, may still attend our proceedings and enable us both to maintain the proud position we occupy, and to realize the brightest anticipations of our Founder, for generations to come.

THE MARSH SAMPHIRE.

Notes communicated by WM. DICKSON, F.A.S., and read to the Club at Alnmouth, on 24th September, 1857.

THE Herbaceous Marsh Samphire (*Salicornia herbacea*) grows at Alnmouth on the Salt Marsh Lands, on both sides of the river Aln, in great abundance. Specimens were produced to-day to the Club, in their natural state and as a pickle at dinner. It is useful for this purpose when in a green state, being fleshy, salt, and a good sponge for vinegar. It is in other respects tasteless and has tough fibres running through the middle of it. It grows between high and low water mark, and must be covered with salt water at each tide. It will not grow in pure sand, but requires marl or clay to be mixed with the sand. It is like a tree in miniature, with stem and branches, and is generally about six or eight inches high, seldom more. When ripe it turns yellow and is then unfit to use as a pickle.

This plant differs entirely from the sea or rock Samphire (*Crithmum maritimum*), which does not grow in the water, but in rocky places, has a warm aromatic flavour, is without the stringy fibres existing in the centre of the *Salicornia*, and besides, it grows to the height of two feet.

Both plants take their name from the French *Herbe de St. Pierre*, and the *Salicornia* from its taste and form, *Sal* salt, and *Cornu*, a horn, the latter arising from the appearance of its branches.

The real Samphire (*Crithmum*) is common on the coast of the English Channel, but none grows within the district which our Club is confined to. It is now, as it was in old times, found on the cliffs of *Dover*, and in the most high and inaccessible places. The locality there is thus immortalized by Shakspeare, in his tragedy of *King Lear*: Edgar, in addressing the blind Earl of Gloster, says:

“Come on, Sir, here’s the place; stand still; how fearful,
And dizzy ’tis, to cast ones eyes so low!—
The crows and choughs, that wing the midway air
Shew scarce so big as beetles: Half-way down,
Hangs one, that gathers *Samphire*;

—(Act 4, Scene 6.)

The difference between the two kinds of Samphire is not generally known, except to botanists. Wallis, author of the

Natural History and Antiquities of the county, mistakes the *Salicornia* for the *Crithmum*. "Samphire—*Crithmum maritimum*,"—he says, "is on the sea-beach near Alnmouth plentifully.

I have prepared this account to induce members to give us papers on small isolated subjects in natural history, as such subjects can be treated here more fully than in larger works, and by inviting discussion, would stimulate our young naturalists to reflect, and furnish information and entertainment to the other members of the Club.

I conclude this paper with Dr. Johnston's account of this plant, in his *Flora of Berwick*, pages 1 and 2:

I.—MONOGYNIA.

Salicornia herbacea.—*Calyx* turned, undivided; *corolla*, none; *stamens*, 1 or 2; *seed*, single, invested with calyx; *plant*, leafless, much branched, and jointed; *stem*, herbaceous erect; *joints*, compressed, notched; interstices inversely conical; spikes, tapering upwards. *Common jointed Glasswort*. Hab. muddy sea shores.

WM. DICKSON.

Rothbury and its Saxon Cross. BY WM. DICKSON, F.A.S.

Stephano.—Stephano is my name; and I bring word,
My mistress will, before the break of day,
Be here at Belmont; she doth stray about
By holy crosses, where she kneels and prays
For happy wedlock hours.

—(*Merchant of Venice*, Act 5, Scene 1.)

THE town of Rothbury, on the north bank of the river Coquet, is just within the limits of our Club. From difficulty of access, it is one of those places which has not yet been visited. But, if salubrious air, the fall of waters, mountainous and rugged scenery, be a charm to the naturalist, I should hope it will, at an early period, be fixed upon as a place of meeting.

The Manor of Rothbury in ancient times was a Royal Domain, and of the inheritance of the Crown of England.

King Henry II. was seized of that Manor, and the Sheriff of Northumberland took the rents and accounted for them to the Barons of the Exchequer yearly at Michaelmas. His son, King John, by charter in the sixth year of his reign, gave to Robert Fitz Roger and his heirs the manor of ROTHBURY, to

hold by the service of one knight's fee for all services; with the woods of the manor and the forest according to the metes and bounds as it existed, while it was in the hands of that King, with vert and venison and all that pertained to a forest. And King John interdicted any one to hunt in that forest or take the venison, without the licence of the said Robert or his heirs, upon pain of forfeiting £10 of silver for the works of the King, and the horses, harness, and dogs then and there used which were to be forfeited for the use of the same Robert and his heirs. The same charter contains a grant of markets, and a fair, goods and chattels of felons, pillory, tolls, the assize of bread and ale, and many other privileges.

The King by letter on the Close Rolls (6 John, m. 4, 1205) acquaints the Barons of his Exchequer of his having made this grant, and commanded them to relieve the Sheriff of the County of his duties as a receiver of rents. And by another letter, dated at Colecester 15th October, (7 John, m. 12, 1205) addressed also to his said Barons, he desires them to compute with Robert Fitz Roger for the farm of the manor of Rothbury, which he had given to him, according to the tenure of his charter.

From this time the King ceased to have any claim to Rothbury, save for the military services in respect of one knight's fee, reserved by the charter.

The following short pedigree elucidates this subject :

I. Barons by tenure.

Hen: II. Roger Fitz Richard, Baron of Warkworth, living 1165. He married Eleanor, one of the daughters and coheirs of Henry Baron de Clavering.

Richard I. Robert Fitz Roger his son and heir, to whom King John granted this manor, as above mentioned. He died 12th John, 1212.

John —. John Fitz Robert, Lord of Rothbury, his son and heir, and one of the twenty-five Barons appointed to observe the Magna Charta; ob. 1240. King John, in the 14th year of his reign, confirmed the grant of this manor to him.

Henry III. Roger Fitz John, Lord of Rothbury, his son and heir; ob. 1249.

II. Barons by writ.

Edward I. to Edward II. Robert Fitz Roger, Lord of Rothbury, his son and heir, summoned to Parliament from the 2nd November, 23 Edw. I., 1295, to the 16th June, 4 Edw. II., 1311; ob. 1310.

Edward I. to Edward III. John Fitz Robert, Lord of Rothbury, aged 40, assumed the name of Clavering. his son and heir, summoned to Parliament from the 10th April, 28 Edw. I., 1299, to the 20th November, 5 Edw. III., 1331; ob. 1332.—*S. P. M.*

This John de Clavering for certain considerations made over to Edward II. the reversion in fee of the Barony of Rothbury, failing issue, and this reversion Edw. III. in the 2nd year of his reign, granted to Henry de Percy of Alnwick, in fee, which was confirmed by Parliament. John de Clavering had no issue, and this manor, on his death, vested in Henry de Percy, and it has continued in the Percy family ever since, and now belongs to Algernon Percy Duke of Northumberland.

About a mile below the town is the famous Crag End Quarry; a pure white close-grained freestone. Here the stones for the landings and staircases of Alnwick Castle have been procured.

The springs of Whitton and Simonside, the Reeve's Well, the Bridge Well, and many other supplies from the bowels of the earth, are copious and refreshing.

The views from Simonside are most extensive; the whole of the coast as far as Tynemouth to the south, and Berwick to the north, is visible; and the eye takes in the Cheviot range, and some places far into Scotland. The prospect also from the ruins of the old hall is pleasing. All these objects are well worthy of a visit when the atmosphere is clear on some long summer day.

The village is sheltered from the north and east by high hills, and to a certain extent from the south and west. It has always been the favourite resort of invalids, and here medical men recommend their delicate patients to sojourn.

This predilection is not mere fancy, for by a late report from the Registrar General, he proves it to be one of the most healthy places in the country; there being as few deaths per cent. as in any other parish in England.

Let those members who pursue the finny tribe bring their rods with them, and after wholesome toil and filling their baskets, sit down by the Reeve's Well (a characteristic term from the olden days), or by the romantic Thrum, or Scottish ford, and there enjoy an hour's repose amid scenes of rural beauty. Some may find their way to Brinkburn Priory, about three miles below the town, on the north bank of the Coquet, (still within our limits), where, in a dark dell and bend of the river, they may roam amongst monastic ruins, and admire

perhaps the best specimen we have of transitional architecture in England.

And nearer still is the romantic Thrum, the dark and deep shade of the Debdon Burn near the Fulling Mill. Whitton Tower with its beautiful grounds should be seen. Here is one of those strong Peel Houses, fortified to resist the marauding excursions of the Scots, in border warfare. Almost every vill had its Peel tower, many of which remain, but none in better order than that of Whitton.

The church has lately been almost rebuilt, still a portion of the ancient structure has been preserved.

Surrounding the church is the burial ground. A part of it is called the Cartington Porch; it got out of repair, and the owner being a Roman Catholic, omitted to keep it up, and it was therefore excluded from the church in A.D. 1658, by the arch being built up. It has since so continued, and is the burial place for that lordship.

The burial ground is of considerable extent, and many a beautiful form lies entombed there, blighted and destroyed by that insidious disease—consumption.

“Beneath these rugged elms, that yew tree’s shade,
Where heaves the turf in many a mouldering heap;
Each in his narrow cell for ever laid,
The rude forefathers of the hamlet sleep.”—

It is, however, the shaft or pillar of the Font in the church to which I wish at present to direct the attention of our members.

In the first place, I must refer to Dr. Charlton’s account of an ancient Saxon cross, from the church of Rothbury, read at the meeting of the Antiquarian Society, at Newcastle, March, 1850, (4 Arch. *Æl.* 60) in which he gives a minute description of portions of this cross, accompanied by careful drawings.

That portion was discovered when the old church was restored, and I think they have been preserved at the time of the Reformation, by being buried in some part of the floor of the building. They were claimed by the contractor as old materials, and were carried off by him to Newcastle, and are now in the museum of the Antiquarian Society.

Dr. Charlton regrets that so small a portion of this fine cross has been recovered, but he does not appear to be aware that a part still remains in the church at Rothbury. That at Newcastle consists of the limbs of the cross and a portion of the shaft.

The limbs contain on the western side the figure of our Lord.

On the eastern side are three well-carved figures. On the north and south sides is Saxon knot-work.

The shaft on one side has a figure with a crossed Nimbus, and on the opposite side, a figure restoring sight to the blind. On another side, the well-known Dano Saxon figure of the Dragon or winged monster, while on the remaining side there is a group of heads, probably the celestial choir.

Dr. Charlton thinks this cross may have been made about the tenth or eleventh century. Now, it is worth recording here that the remnant of the shaft of this cross is still in Rothbury church.

The drawings now produced will shew how completely this portion of the cross is identified with the other, when they are compared with those in the plate accompanying Dr. Charlton's account.

The Stone Basin or Font upon which the shaft is placed is modern; the date 1664 is cut upon the basin. This is explained by the old vestry book; for at a meeting of the ancient church vestry, held April 1st, 1662 (Easter Tuesday) it is recorded that two of the Four-and-Twenty had gone over to the Romish church, and that two others were appointed in their stead. The meeting was one of a strong Protestant cast. The record states: "In regard that the late troublesome times had occasioned the spoil and deprivation of those things convenient and necessary for the celebration of God's public worship in His Holy Church, in regard of authority enjoining and the due consideration had thereupon, the Rector, together with the Curate and Four-and-Twenty" ordered that a cess of each man's ancient rent throughout the whole parish should speedily be raised, collected, and levied by the new Church Wardens for the present year for a Font, cover of a Font, and several other things.

The vestry were not very quick in their motions, for the stone basin was not placed where it now stands till 1664, and two years after, I find in the same book one guinea ordered to be paid for the Font cover and steps.

This was two years after the restoration, when things began to wear a more settled aspect.

The record of the meeting of Easter Tuesday, 1662, finished with the words:—"Vivat Rex—Floreat Ecclesia."

The Stone Basin has the date 1664 upon it, but it is the stem or pillar of the cross, and not the basin, with which we have to deal. The side having the Saxon Knot-work faces eastwards and into the church, and the chief sculpture to the west; so that a pious votary, kneeling in adoration, would have

his face to the east, as commented upon by Dr. Charlton.

The sculpture may represent three principal circumstances in the history of the world.

On the north side is portrayed an animal walking quietly amongst trees and foliage, and feeding upon the fruits of the earth, figurative of the peaceful and happy state of things before the fall of man.

On the south side there is carved a number of nondescript animals preying and feeding on each other, shewing the state of wickedness after that occurrence.

On the west side is seen the Saviour of the world, ascending up into heaven, and underneath, numerous heads of men looking upwards in a suppliant manner.

On the east side is the endless rope pattern, or the Saxon knot-work, before alluded to.

The sculpture is full of spirit in carving and design, as may be seen in the wood cuts at the end of this article, and is probably about the age Dr. Charlton represents it to be.

I think the parts at Newcastle are the upper portion of the shaft and the limbs of the cross, and that which remains at Rothbury is the lower part of the shaft or pillar.

I may add that Hutchinson in his view of Northumberland notices the pedestal of this Font thus:

“The stone is not exactly square; at the bottom, where it appears intended to be fixed into some foundation stone, two opposite sides are 18 inches in breadth, the other 14 inches, but where the sculpture begins, the edges of the stone are taken off. The work in bass-relief on the west side is about 26 inches long and 14 inches broad, and I presume represents our Lord sitting in Judgment. The principal figure has lost its head, but holds a sword in the left hand. On each side is the figure of an angel kneeling, and below them a crowd of heads lifted up, their hands clasping books, others elevated, or laid upon the breast. The other side contains rich ornamental sculpture of fancy figures interwoven with foliage; such as are seen upon the obelisk in Bewcastle church yard, in Cumberland. From their similarity, some people have presumed they were of the same date.”

The use of Pillars of stone may be traced to a very remote period; perhaps the oldest on record are those mentioned in Holy Writ.

“*And Jacob took a stone and set it up for a Pillar.*”—(xxx. Gen. 45.)

“*And Rachael died and was buried in the way to Ephrath which is Bethlehem.*”

“*And Jacob set up a Pillar upon her grave, that is the Pillar of Rachael’s grave until this day.*”—(xxxv. Gen. 20.)

Stones or Pillars, with and without symbols or inscriptions, have been erected to commemorate events by all nations of the world.

It is recorded in “the Chronicles of Scotland, 2nd Buke, Cap. X,” That King Reatha (who lived two centuries before the Christian Era) “was the furst king amang the Scottis that fund ingine to put nobillmen for thair vailyeant dedis in memory, and maide riche sepulturis for the bodyis of thaim that was slaine be Britonis in defence of this Realme. He commandit als monie hie stanis to be set about the sepulture of everie Nobillman as was slane be him of Britonis. In memorie hereof sindry of thaim remainis yet in the hielandis, that the pepill may under sic men now vailyeant in their dayis: throw quhilk it come in use that the sepulturis of nobilmen was holden in gret reverence amang the pepill. On their sepulturis was ingravin imageris of Dragonis, Wolfes, and other Biestes, for no inventioun of letteris was in thay days to put their deidis of nobilmen in memore.”

For more particulars as to Pillars and Crosses, I refer to the volume of the Spalding Club for 1856, edited by that accomplished scholar, J. Stuart, Esq., F.A.S., entitled “*The Sculptured Stones of Scotland.*”

The common symbols on those ancient sculptured stones, in the north-eastern part of Scotland, are

Crescents and the Spectacle Ornament, with and without the sceptre.

Mirror, Elephant and Comb.

Arch, or Horse Shoe and Fish.

Serpent, with and without the sceptre.

Here, on the borders, we have the mysterious concentric circles carved on the rocks of Doddington and elsewhere, emblematical of eternity.

But as Mr. Tate, one of our members, has promised a paper on this subject, I forbear to add more.

There is a natural transition as to these Pillars; first, during the Mosaic dispensation, then among the Heathen tribes, the Druids and ancient Britains, and lastly, the early Christians. And thus it is, that most of our ancient stone pillars now in existence are symbolical of Christianity. Such is the case with the Rothbury cross, now under consideration.

But others again, such as Percy’s Cross, at Hedgley, and the stone at Otterburn, and Malcolm’s Cross, at Alnwick, and many others, commemorate stirring events in the history of our own country.

We have also the *Stane Cross* (the Hurl stone) at Chillingham and other March "Stains," set up, no doubt, as boundaries in very early times.—(Hodg. pt. iii., vol. ii., p. 119.)

Mr. Hodgson had not got as far north as Rothbury with his history, and, therefore, what is known about Rothbury is chiefly found in the Close and Quo Warranto rolls :

2 *Wallis* 515.

1 *Hutchinson* 227.

2 *Mackenzie* 50, (Ed. 1825.)

To give a history of Crosses in this paper would make it run to too great a length, but the proceedings of the Archaeological Institute are full of information about them. They were erected by the sides of roads, on boundaries and in church yards; and as the weary pilgrim and the devotee approached one of them, down they knelt and offered up a short and anxious prayer of thanks for preservation and for success in some object to be accomplished.

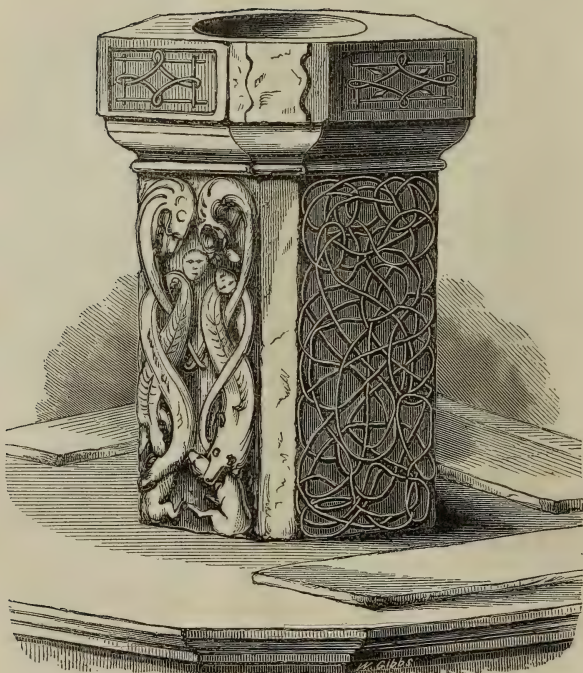
No doubt before this antique cross at Rothbury many an anxious prayer has been offered up, and many a knee has bent before those sculptured emblems; forgetting the positive injunctions of Holy writ to the contrary :

"*Thou shalt not make to thyself any graven image, or any likeness of any thing that is in heaven above, or in the earth beneath, or that is in the water under the earth: Thou shalt not bow down thyself to them*"—(20 Exodus, 4 and 5.)

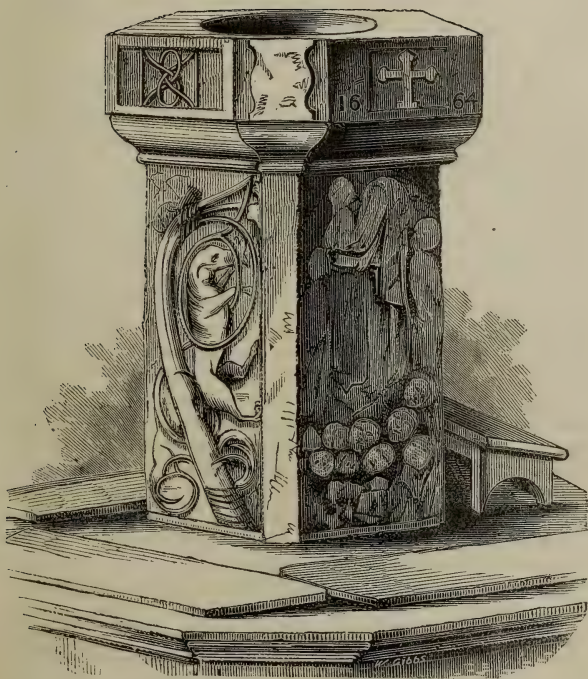
Some fancy the sculpture in Rothbury church represents the day of Judgment, but whether this be so, or it means to record the ascension of our Lord into heaven, the members of our Club will, I hope, have an opportunity of judging for themselves, as well as of enjoying the exhilarating freshness of the mountain air, in this most healthy district.

WM. DICKSON.

Alnwick, May, 1858.



[Wood cut referred to at page 71.]



[Wood cut referred to at page 71.]

Notes on the Prior Existence of the Castor Fiber in Scotland.

By CHARLES WILSON, M.D., F.R.C.P.E.

As a member of the Berwickshire Naturalists' Club, I beg to transmit the following notes on the former existence of the Castor Fiber, or Beaver, in Scotland; as suggested by a discovery of the remains of the interesting animal in a locality familiar to many of the Club's oldest members, and lying within the immediate circuit of its researches.

That the beaver was at one time indigenous in Scotland has been long known, and has, especially, already been noted by Dr. Neill of Edinburgh, in an interesting paper* read in 1819 before the Wernerian Natural History Society. Dr. Neill adduces two then known examples of the occurrence of the remains of the animal. The record of the first instance is derived from the Minutes of the Society of Antiquaries of Scotland, dated in December 1788; where it appears that Dr. Farquharson presented to the Society the skeleton of the head and one of the haunch-bones of a beaver, found on the margin of the Loch of Marlee, a small lake in the parish of Kinloch, in Perthshire, near the foot of the Grampian Mountains. The lake had been partially drained for the sake of the marl which it contained; and, in the process of excavation, under a bed of peat-moss between five and six feet thick, the beaver's skeleton was discovered. In a neighbouring marl-pit, a pair of deer's horns, branched, and of large dimensions, were found nearly at the same time; and, along with these, two bones, which our eminent anatomist Dr. Barclay suggested to have been probably the metatarsal bones of a large species of deer, contemporary with the beaver, but now, like it, extinct in our country. The relics of this beaver are still preserved in the Museum of the Royal Antiquarian Society in Edinburgh, where, like Dr. Neill, I have myself examined them. They appear to be those of an animal which had reached maturity. The back part of the cranium is gone, and the left zygomatic arch is broken; but the "haunch bone," or left os innominatum, is entire. A part of one side of the lower jaw-bone is also broken, and here only some remains of the very characteristic incisors still exist. The bones are dyed of a deep chocolate colour, the natural result of their long contact with the peaty substance.

The second instance adduced by Dr. Neill occurred in October 1818, on the estate of Kimmerghame, in the parish

* Memoirs of the Wernerian Natural History Society, vol. iii. (1821), p. 207.

of Edrom, near the head of that district of Berwickshire called the Merse. In the process of Draining a morass called Middlestots Bog, there was found, at the depth of seven feet from the surface, under a layer of peat-moss of that thickness, what appeared to have been the complete skeleton of a beaver, dispersed, however, in rather a promiscuous manner, as if through the gradual separation of the parts by unequal subsidence. The remains lay upon a surface of marl, in which they were partly imbedded, and partly in a whitish layer of mossy substance immediately superjacent. Only the denser bones of the cranium and face, and the jaw-bones, retained sufficient firmness to fit them for being removed and preserved in a dry state. Several of the long bones and the vertebræ, though they seemed perfect while lying *in situ*, crumbled under the touch, or after exposure. Near the same spot were found a pair of horns, of great size, and with fine antlers, belonging to the large species of deer already mentioned; and, among the vegetable remains in the peat, were the shells of filberts, with the wood of birch and alder, and that of oak in less abundance. The skull and lower jaw-bone are now in the museum of the University of Edinburgh. Both, as described by Dr. Neill, were entire, with all the incisors perfect, their cutting edges sharp, and the peculiar coloured enamel, found alike in the recent beaver, still subsisting on the outer convexity, though deepened to an almost jet-black. The molars were also complete. This is still the condition, with the exception that the right zygomatic arch is now imperfect. The animal, as in the preceding instance, appears to have been of mature, though not of advanced age. It is proper to add here, that, on the testimony* of the writer of the Statistical Account of the parish, several other heads of the beaver were then found in the same deposit, but in less perfect preservation. We have thus approximative evidence of the ancient existence of a colony in the locality.

Of a third instance of the discovery of the remains of the beaver in Scotland, a verbal report was given by me, in 1843, at a meeting of the Club, and is noticed† in the late esteemed Dr. Johnston's sketch of its proceedings for that year. On the verge of the parish of Linton, in Roxburghshire, there is a remnant of what has evidently once been a far more extensive loch, which had skirted for some distance the outer range of the Cheviot Hills, but which, from some alteration of the

* The Statistical Account of Scotland: County of Berwick (1841), p. 267.

† History of the Berwickshire Naturalists' Club, vol. ii., p. 48.

levels, has now, for the most part, gradually drained itself off to the westward. Into this loch had flowed the waters of the Cheviots, entering it, as the little river Kail, by a narrow gorge towards the eastern extremity: and it is doubtless through the agency of this often impetuous current, that those alterations have chiefly been effected which have diverted the stream from what is now the narrow limits of Linton Loch; and left it contracted to a few stagnant pools, imbedded in a deep but not extensive morass, from which, however, still flows a considerable body of water by an artificially constructed channel. The near vicinity of the loch presents many localities of interest, as well in legendary lore as from later associations. The hollow at Wormington, still known as the "worm's hole," marks, according to the familiar story, the ancient haunt of a monstrous serpent or dragon, the destruction of which, by William de Somerville, obtained for him the gift of the surrounding barony from William the Lion. The little knoll, consisting wholly of fine sand, on which the church of Linton is built, has seemed to the peasant to justify the tradition, that its elevation was the work of two sisters, who sifted the heap as a voluntary penance, to expiate in a brother the crime of murder. The traces of the foundations of the neighbouring fortalice, still lurking under their covering of green sward, recal the memory of more than one of the scarcely less stirring while more authentic scenes of border warfare; and closer to the loch, perched above its southern margin, we have the little possession of Wideopen, the inheritance of the poet Thomson, who is said to have gathered here, among the storms of the hills, many of the materials for the admirable descriptions in his poem of *Winter*.* Through the adjoining tract of the Cheviots, spreads that range of which it could be said, as in the ballad of the Battle of Otterbourne:—

"The deer runs wild on hill and dale,
The birds fly wild frae tree to tree."

Few places, therefore, could be more appropriate for the discovery of any remains which were to aid in giving body to our traditions, as in forming a link between remote and existing states of civilization.

The moss, which constitutes the body of the Linton morass, is variable in depth, and covers a very extensive deposit of marl, to obtain which, for agricultural purposes, operations on a considerable scale were undertaken by the tenant, Mr. Purves, by whom the relic of the interesting animal, found in

* History of the Berwickshire Naturalists' Club, vol. iii., p. 21: *Linton and its Legends*.

the course of these, was placed in my hands, and to whose intelligent observation I am chiefly indebted for the particulars of its discovery. In digging about twenty yards from the margin, and after penetrating a thickness of moss of about eight feet, the marl was reached, and upon its surface was found a skull, in excellent preservation,* easily recognised by me, on examining it, as that of a beaver. Either no other parts of the skeleton had remained preserved in its contiguity, or they had failed to attract the attention of the workmen; the probability being that, from the slighter texture of most of the other bones, they had been less able to resist entire disintegration, or had crumbled on exposure. The remains of deer and other animals were also discovered on the surface of the marl, at about the same distance from the margin; but, at other places, the horns and bones of deer, and among these a lower maxilla, were found fourteen feet beneath the marl itself, yet still within its layers, or at about an aggregate depth of twenty-two feet. Among the remains preserved and placed before me were horns of the red-deer, with metatarsal bones, evidently also of animals of the deer species, all betokening individuals of once stately dimension; while the left tibia of an ox, doubtless the *Bos primigenius*, which was found imbedded at a depth of seven feet within the marl, I computed must have belonged to an animal measuring at least six feet, or, with the hoof and soft parts entire, fully half a foot more to the summit of the shoulder. The moss, at the part covering these remains, might be viewed as divided into three layers. The upper of these, approaching to about three feet in thickness, consisted of the traces of comparatively fresh vegetation: the second layer, measuring about two feet, had a less firm consistence, and changed its colour of a greenish brown, when moist and newly exposed, to almost a white when dry: the third layer extended to about four feet, but in some places to a much greater thickness, and was almost black, holding imbedded, in various grades of preservation, many and not mean remains of the primeval forests, such as trunks of trees, for the most part hazel and birch, with an intermingling of oak, some measuring from two to even four feet in diameter; and, along with these, large quantities of hazel nuts, heaped into masses, as if gathered and swept from the upper woodlands by the mountain freshets. In some places gravel was found

* The skull is now placed in the Museum of the Tweedside Physical and Antiquarian Society at Kelso; a remarkable collection, considering its position in a small country town, but which would have fulfilled a better design, and one more worth adopting elsewhere, had it been restricted, as originally planned, to the illustration exclusively of the Natural History and Antiquities of the immediately surrounding district.

deposited above the moss, bearing testimony to the action of similar currents.

The stratum of marl varied from two, to almost eighteen feet in thickness, and consisted of the usual fresh-water shells, but mainly of *Planorbis* and *Limnæa*; the greater part being of almost microscopic dimensions, yet often in the most entire preservation. Where the relic of the beaver had been deposited, the marl, however, to judge from portions taken from within the skull, seems to have been largely, if not entirely, composed of infusoria. On the application of an acid, after a smart effervescence, with the disappearance of a considerable bulk of the material, there remained amorphous, ferruginous-like masses, and, abundantly interspersed with these, the silicious coverings of the animalcules, if they be really animal organisms. Among them I distinguished *Epithemia Argus*, *sorex*, *turgida*, and *longicornis*; *Cyclotella operculata*; *Gomphonema constrictum*; *Nitzschia sigmoidea*; *Surirella craticula*; *Cymbella helvetica*; *Navicula lanceolata*; and probably most abundant of all, *Himantidium arcus*. The remains of the mammals found in contact with the peat, including the skull of the beaver itself, were of the usual dark tint acquired from that substance: those deposited in the marl preserved more nearly their natural colour. Near the margin of the loch, and about seven feet deep in the moss, were found an arrow-head, and two or three iron horse-shoes; the latter of small dimensions. Could we regard these horse-shoes, and this individual beaver, thus found at nearly the same depth in the moss, as having reached their position there coëtaneously, as, perhaps, approximatively we may, the furthest limit to which our archæological experience would entitle us to go back for this would probably be the Anglo-Saxon period; but our surmise as to the era would still be a rude one, and within it, or even possibly long after it, though scarcely before, we must be prepared to allow a wide range.

To these proofs of the prior existence of the beaver in Scotland, derived from the actual discovery of its remains, it is easy to add others of a similar description from various countries, in which it has evidently also been once indigenous, but in which it has alike ceased to exist. An early instance, in England, is that in 1757, by Dr. Collet,* who mentions the heads of beavers as having been found, along with bones of other animals, in a peat-pit near Newbury, in Berkshire. Similar discoveries of remains, as quoted by Professor Owen,† have

* Philosophical Transactions for 1757, p. 112.

† History of British Fossil Mammals and Birds, pp. 184, 190.

been made at Hilgay, in Norfolk, where they were found associated with those of the great Irish deer. A lower jaw, found in 1818 near Chatteris, is recorded in the Proceedings of the Cambridge Philosophical Society. In at least three other instances, all referred to by Professor Owen, the remains of the beaver have been found in the peat-mosses of Berkshire, and in the Cambridge fens; while other discoveries, at Mundesley, Bacton, Southwold, and Happisburg in Norfolk, and at Thorpe in Suffolk, appear under relations which seem to carry the antiquity of the beaver in England farther back into the tertiary period, and ought probably to be referred to a different, yet closely allied species. In Denmark, we learn from a highly interesting communication by Professor Steenstrup,* that a lower jaw, with the greater part of the extremities of a beaver, evidently belonging to an individual animal, was discovered in the moss of Christiansholm; and that a tooth has also been found in Fyen, all the other traces hitherto of its former existence within the Danish territories having been limited to Sjælland. Specimens of stems, evidently gnawed by the beaver's teeth, were taken from Mariendals moss, the special locality being regarded by the Professor as probably occupying the former bed of a stream, which had been once its habitat. Similar stems from two to four inches thick, with beaver marks, were seen in Brönsholm moss, in great quantity, and laid with remarkable regularity; while a like deposit, at a depth of about three feet, occurred in a moss near Lyngsbye.† In these interesting facts, we appear to recognise distinctly the remains of the dams of the beaver, and the familiar evidences of its singular constructive faculties. Perhaps we may further refer to a period not remote from that of these relics in the mosses, the location of three beaver's teeth, in a greatly damaged condition, at the side of a human skeleton, which was found in a tomb of an ancient Lap, opened recently‡ at Mortensnæs, on the Varangerfjord, in the extreme north-east of Norway, a country, however, in which the beaver is still indigenous. A stone hammer, bearing marks of use, lay in the same grave.

When we turn from these sufficiently decisive indications of the ancient resorts of the beaver, and seek for other evidences of a historical, topographical, or documentary character in relation to its former existence in Britain, if these are

* Oversigt over det Kgl. danske Videnskabernes Selskabs Forhandling, 1855, p. 381.

† Ibid., pp. 2, 382.

‡ Forhandling af danske Videnskab. Selsk.: Illustreret Nyhedsblad. (Christiania, 1856), pp. 97, 104.

not presented to us in any marked abundance, neither are they wholly wanting, or devoid of curiosity and interest. We have no earlier, and can scarcely have any more authentic, notices of this description than such as are derivable from the names of places, which our ancestors often rendered commemorative of some leading feature or specialty of the site. Thus, in the nomenclature of the Anglo-Saxons, as exhibited in the "*Codex Diplomaticus Ævi Saxonici*," we find the names, *Beferburne*, *Beferige*, *Beferic*, and *Beferluc*.* In the Glossary of Ælfric, the Anglo-Saxon Archbishop of Canterbury near the close of the tenth century, appended to his "*Grammatica Latino-Saxonica*," we have the *Befer* rendered as the *Fiber* or *Castor Ponticus*. The annex in each name: *burne* (brook), *ige* and *ic*, or *icg* (island), and *luc* (inclosed space, fence), is entirely apposite, and suggests to us so perfectly the ordinary habitat of the animal, or the construction of its dam, as to establish at once the certainty of its having existed at the individual place in the Anglo-Saxon period. Again, in an ordinance of Edward I. for the government of Scotland, dated in 1305, we find William of *Bevercotes* named as chancellor of the kingdom; and here we are reminded of the huts (Anglo-Saxon *cote*), of the beaver, a cluster of which had evidently led to the territorial designation of this dignitary. There is a "*Bevere Island*," which lies about three miles north of the city of Worcester, which is popularly understood to have been so denominated from its having been frequented by beavers:† and doubtless it might be easy to glean elsewhere many similar local designations. Leland, for example, writing prior to the middle of the sixteenth century, mentions the town of *Beverley*, in Yorkshire, as having for its insignia, on its public seal, the animal "*quod vocatur Bever*;" and, in a subsequent passage, on what purports to be the authority of an uncertain writer of a life of St. John of Beverley, he introduces the name of the place as, "*Deirewald, locus nemorosus, id est, sylva Deirorum, postea Beverlac, quasi locus, vel lacus castorum, dictus à castoribus quibus Hulla aqua vicina abundabat*."‡ While we give due weight to this, as advanced unquestioningly by one of Leland's habits of investigation, writing at his time, yet while citing one of an age far anterior, it appears evident, nevertheless, that not only was the beaver then utterly extinct in the country, but that, at no long period after the

* Leo, *Local Nomenclature of the Anglo-Saxons*, p. 14.

† Allies, *Antiquities of Worcestershire*, pp. 151, 152.

‡ Leland, *Collectanea de rebus Britannicis*, tom. iv., pp. 34, 100.

Anglo-Saxon era, it had already ceased to be familiarly known in England.

We have proof of a more direct nature of the actual existence of the beaver in Wales, at this early period of the civil history of our country, but nearly expiring period of the history of the English beaver.* In the code of Hywel Dda, framed towards the commencement of the tenth century, and therefore considerably before the time of Ælfric, we find† the animal valued at 120 pence; and, as in the following section we find the skin (*croen Llosdlydan*) appreciated alone at precisely the same amount, we infer that the latter merely was regarded, and that neither the carcass as food, nor the castoreum as medicine, was then held in esteem by the Welsh. But to show how highly the skin was prized, and of course as a fur, we may contrast this valuation with that of the ox and deer, each of which is rated at eightpence; while that of the goat or sheep is rated at only a penny. An oak tree was as precious to the mountaineers; for, if sound, it was valued also at 120 pence. Among the tolls licensed to be levied at Newcastle-upon-Tyne, in the time of Henry I., we find the *tymbra beveriorum* fixed at fourpence; and this, it is important to note, appears to have been an export duty.‡ At least half-a-century after the period of Henry, and more than two centuries after that of Hywel Dda, we have the evidence of a witness of remarkable intelligence, that the beaver still survived as indigenous in Wales. Silvester Giraldus, travelling in that country in 1188 with Archbishop Baldwin of Canterbury, who preached there that crusade in which he afterwards followed Richard Cœur de Lion to the Holy Land, and perished at Acre, tells us, in speaking of the river Teivi, that it retained a special notability: “inter universos namque Cambriæ seu etiam Loegriæ fluvios, solus hic castores habet.” He then proceeds to give an account of the habitat of the animal at some deep and still recess of the stream; describes its dams and huts, and its methods of construction, with considerable minuteness; and records the dangers to which it is liable on the score of its skin, which is coveted in the west, and the medicinal part of its body, which is coveted in the east: while he adds, though with evident scruple as to

* Of a more remote but wholly uncertain antiquity, yet worth mentioning, is the circumstance that the beaver seems to have occupied a prominent place in the old Druidical mythology of Wales, especially in relation to the tradition of a general deluge. It is said to have been even an object of worship in ancient Persia.

† Leges Wallicæ, curante Wotton, lib. iii., cap. v., sect. xi. 40; sect. xii., 10, De pretiis animalium ferorum et cicurium.

‡ Acts of Parliament of Scotland, vol. i.; preface, p. 34.

the orthodoxy of the practice, that in Germany, and the northern regions, great and religious persons "tempore jejuniorum," eat the tail of the fish-like creature, as having both the taste and colour of fish. Giraldus informs us further, that beavers were then reported to exist also in Scotland, but likewise only in a single river, and in scanty numbers.*

Dr. Neill, who refers to Giraldus, takes an opportunity of stating,† in allusion to this concluding observation, that no mention of beavers occurs in any of the public records of Scotland, now extant. To this, however, there is at least one exception. In the *Assisa Regis David de Tolloneis*, cap. ii., supposed to date towards the middle of the twelfth century, but evidently founded on the English Act of Henry I., the export duty is fixed, "of a tymmyr of skynnis of toddis quhytredys matrikis cattis *beveris* sable firrettis or swylk uthyr of ilk tymmyr at Pe outpassing $\text{iiij}^{\text{d.}}$ ‡" If we note here that the duty is one upon exportation, "ad exitum," or "outpassing," we can scarcely conclude otherwise than that the beaver was then met with in the country, and apparently even in considerable numbers, so that its fur was an ordinarily recognised article of commerce, of native produce. To judge, however, from the language of the Scottish rendering of the Latin original of the Assize of the first David, which we have here purposely adduced, we must regard its regulations as having remained in force till a much later era; and probably till that of the second king of the name, or till about the middle of the fourteenth century. But the animal which was already reported as rare in the time of Giraldus Cambrensis, yet which seems to have been held entitled to continue as furnishing an article of impost more than two centuries after, appears, in still another century, to have shrunk into such narrowly limited numbers, that it was at last no longer deemed necessary to retain for it a place in a fiscal enactment. In 1424, at the first parliament of the first James, the martin, polecat, fox, and other skins, are still named as articles bearing an export duty, but the beaver is omitted.§ Yet, at even a later period, when we find Hector

* Silvester Giraldus Cambrensis, *Itinerarium Cambriæ, seu laboriosæ Baldvini Cantuariensis Archiepiscopi per Walliam legationis accurata descriptio*, lib. ii., cap. 3.

† Mem. of Wern. Nat. Hist. Society, vol. iii., p. 211.

‡ Acts of Parliament of Scotland, vol. i., p. 303. The *timmer* still denotes in Sweden a bundle of forty skins. From a citation in Ducange (*Gloss. Med. and Inf. Latin. V. Timbrium*), the timber in France, in the year 1351, contained sixty skins. The term in this country appears to have usually denoted the number of forty.

§ Laws and Acts of Parliament of Scotland (1682), part i., p. 6.

Boethius reporting, after the lapse of almost another century, that the wild region of Loch Ness contained then, not only a great abundance of wild animals such as stags, horses, and roes, but “ad hæc Marterillæ, Fovinæ ut vulgo vocantur, Vulpes, Mustellæ, *Fibri*, Lutræque in incomparabili numero, quorum tergora exteræ gentes ad luxum immenso precio coemunt,”* it is with the inclination, led on by the Assize of David, and by the narrative of Giraldus, with both resting securely on the discoveries in our mosses, still to extend to him a more entire confidence than has been customarily conceded by others. Bellenden, in translating this passage, while he omits the stags, roe-deer, and otters, preserves the “mony martrikis, *bevers*, quhitredis, and toddis,” with the intimation that “the furringis and skinnis of thaim are coft with gret price amang uncouth marchandis.”† The very license which Bellenden appears to have allowed himself in his translation, seems to me here to lend weight to the authority of the original statement. He may have omitted the kinds of deer, and the otter, as animals too notoriously abundant everywhere to require remark; but, whatever was his motive, that he should have excluded the one, and retained the other, showed the probability of some grounds for a selection; and seems to give greater authenticity to that which he left thus, in a more marked manner, with the support of a conjunct testimony. As to the “incomparable number,” this must be held to apply to the animals in the aggregate, and not to the beaver in particular; and the rarity of this was certainly not the less likely to enhance its price, that it had annulled its importance as a source of revenue.

Upon the whole, it seems thus fairly admissible, that the existence of the beaver in Scotland may be authentically traced as far down as to the beginning of the sixteenth century; though doubtless for long in extremely limited numbers, and, naturally, only in deeply secluded localities. Sibbald, writing towards the close of the century which follows,‡ adduces merely the statement of Boece, and, without rejecting it, professes his ignorance as to whether the animal was still indigenous. It may be noted incidentally here, that the Gaelic Dictionary of the Highland Society of Scotland contains the *dobhran-leasleathan* as the designation of the beaver; while we remark, at the same time, the close analogy of this term to the *Uosdlydan* (the broad-tailed animal) of the code of Hywel Dda. Reverting to Wales, the celebrated Camden speaks

* Hector Boethius, *Scotor. Hist.*; *Regni descrip.* (1527), F. ix.

† Boece, translated by Bellenden (1536), cap. viii., F. xxxiii.

‡ *Scotia Illustrata* (1684), part ii., lib. iii., p. 10.

of the Teivi as “olim castoribus, nunc salmonibus abundans.”* In the later edition by Gough, it is added,† that in the Conway there is a deep, wide, still water, called to this day by a name denoting the beaver’s pool. Ray,‡ followed by Pennant,§ each referring to Giraldus, names also other places in Wales which are reputed to have been the former haunts of the animal, as we have shown that similar spots are recognisable in England.

Roman Altar found at Gloster Hill, in the Parish of Warkworth. Communicated by WM. DICKSON.

Gloster Hill is situated on the banks of the river Coquet, near its entrance into the sea, in the vicinity of Warkworth Harbour. The records of Northumberland are very silent as to its ancient history, which is accounted for by its having been for ages, part of the possessions of the church, and therefore not liable to do any military services. It is one of the townships of the parish of Warkworth, and parcel of the rectory of that parish.

The Bishoprick of Carlisle was founded by Henry I., and this township (which was the glebe of the rectory) and the great tithes of the parish, formed part of the endowment. The Bishop has always been accustomed to demise this glebe and the tithes to tenants for twenty-one years, renewable every seven years on payment of fines. The present tenant is Robert Dand, Esq. The township consists of 260 acres, and is worth about £290 yearly. In 1663 its annual rental was £38, and the lessee, Mr. John Palfrey.

It was never supposed that the Romans had any station in this quarter, but from the name of the place, and its situation near the mouth of the river, they probably had a stronghold here.

From Gloster Hill a short distance westward, is Temple Hill, which is supposed to contain Roman remains, and further west is Chester House, also a Roman name, (from *castrum*), and further on still is the Street Head, all in the parish. Probably a line of Roman road ran in this direction from the interior to the sea port of Coquet mouth.

As a corroboration of its Roman origin, a Roman altar was found at Gloster Hill in 1856. It was turned up after being struck by a plough.

* Britannia (Lond. 1600), p. 586.

† Gough’s Camden, vol. ii., p. 560.

‡ Synopsis Methodica Animalium (1693), p. 213.

§ British Zoology (ed. 1812), vol. i., p. 122.

It is not perfect, it comprises the capital and a part of the stem ; the inscription is also imperfect, and probably the commencement of one of greater length.

The letters are,—

M C E S T R I
C O H I

From a comparison with other like inscriptions, it may be thus read :—

M. C A | M P E S T R I | B U S
C O H O R S. I

Or,

MATRIBUS CAMPESTRIBUS
COHORS PRIMA:

An altar dedicated to the Sylvan Mothers by the Roman soldiers of the first cohort, who were at that time at the *castrum* or camp of that place. A wood cut representation of this fragment is placed at the end of this article.

There is at the rectory at Ryton, a slab found at Benwell, much ornamented on which there is the following inscription :—

Matribus campestr[ibus]
et Genio alæ Pri[mæ] Hispano-
rum Asturum [ob virtutem]
[appellatæ] Gordianæ Titus
Agrippa Præ[fectus] templum a s[olo]
[res]tituit.

To the Camprestrial Mothers
and to the genius of the first wing of Span-
ish Astures, on account of their valour
styled Gordian, Titus

Agrippa, then prefect, this Temple from the ground,
rebuilt.

These altars set up to the mothers of the plains are not very clearly explained, but we find other altars dedicated to the

Matres transmarinæ,

the transmarine mothers. Altars and slabs also were set up to all the Heathen Deities, to Deæ Matres, to nymphs, to the manes of Emperors, Generals, and many other persons. Those altars may have reference to the Roman mothers who gave birth to children in Britain, in contradistinction to those who added strength to the empire beyond the seas.

I leave, however, to those learned in Roman antiquities to explain the meaning of altars dedicated to "the Mothers of the Plains."

WM. DICKSON.

Alnwick, June, 1858.

Sketch of the altar found at *Gloster Hill*, referred to by the above article. Size 14 by 18 inches.



An account of the Spurs found near the foundations of Belford Castle. By the REV. J. D. CLARK.

About thirty-five years ago, when some workmen were employed in enlarging the mill pond, formerly part of one of the moats of Belford Castle, they discovered, close to the foundation on the south side, some human bones and a pair of bronze spurs which have been richly gilt, and are still in good preservation. The rowels are $2\frac{1}{2}$ inches in diameter with 20 points, the clasps are in the form of Fleur-de-lys. They were submitted in 1823 to Dr. Meyrick of London, then the great authority in Antiquarian matters. He stated that they were of the period just succeeding King Henry VI. (A.D. 1461), and preceding the large rowel of King Edward the IV.

It is not unlikely that they may have adorned the boots of some French Knight who accompanied Margaret of Anjou from France, when she prevailed on Louis XI. to send over 2000 men at arms to assist her in an inroad upon England, and who landed on the coast of Northumberland. A part of these forces were defeated at the battle of Hedgley Moor, by Lord Montacute, Warden of the Eastern Marches.* The unfortunate owner of the spurs may have been wounded in the battle, and dying at this place on his way back to the coast, been buried on the outside of the walls of the castle.†

Obituary Notice of the late Rev. Joseph Watkins Barnes, Vicar of Kendal. By R. C. EMBLETON.

Since our last anniversary, we have to lament the death of one of our earliest members—the Rev. Joseph Barnes. He was son of the late Vicar of Berwick, and was born there in the year 1806. He received from his father the foundation of that education, which, by subsequent study and perseverance, enabled him to obtain those high honors he ultimately aspired to. From the care of his father, he proceeded to the University of Durham, where he obtained an exhibition, and in 1824 to Trinity College, Cambridge. He was very shortly elected scholar, and in 1828 he took his Bachelor's degree, his name appearing in the first class Classical Tripos, and also among the senior Optimes of the year. In the following year he was elected a Fellow, one of the highest honors which await on intellectual ability. In 1831 he took his Master's degree. He became a member of our Club in the

* 25th April, 1464, according to Hume.

† Castrum de Belfurth, held by Lord Darcy about 1460.

following year, and attended several of our meetings; but never contributed to our transactions. In 1840 he accepted the small living of Swineshead, near Boston, Lincolnshire, from which he was transferred in 1843 to the Vicarage of Kendal, on presentation by his college. His character which was marked by open heartedness and generosity to a great degree, soon gained him the good will of his parishoners, and he seemed to know no stronger bond of brotherhood than the opportunity of rendering a service, wherever it was in his power to do so. Possessing an enlarged and liberal mind of catholic sympathies, with a warm attachment to his church, he never forgot what was due to others, who conscientiously differed from him on matters of ecclesiastical discipline and doctrine, and by so doing he gained the respect and support of all denominations. In the restoration of the fine old church, he has raised to himself an enduring monument, and this was entirely effected by his untiring zeal. For a considerable time his health had been very precarious, and after much suffering, he died on the 15th of May last, in the 52nd year of his age, leaving a widow and two daughters to lament his early death.

Miscellanea Zoologica. By R. C. EMBLETON, Secretary.

On the habits of the *Cypræa Europæa*, or Common Cowry.

Although few shells are more plentiful in a dead state along our sandy shores than the common "Jenny Groat," its occurrence alive is, as far as my own observations go, of very rare occurrence; for during a residence of twenty-six years, I have never, until the last autumn, been successful in obtaining it. After a pretty sharp gale from the north-east, large quantities of the larger sea weeds were thrown on shore, and at the root of one, I found five beautiful living specimens of this shell. I immediately transferred them to a small aquarium, a common fish bowl; where they continued to live, and apparently to thrive, for three months; and had the water been changed, and attended to as usual, I have little doubt but that they would still have been in existence; but absence from home, for two or three weeks, had been enough for their destruction. Amongst the five specimens, two were marked with the three black spots on the shell, which my friend, Mr. Alder, had never seen here, and which coincides with the observations, of the deeply lamented Edward Forbes, that as you journey northwards, these markings become almost extinct. The animals shewed several variations in their colouring. In two specimens, the mantle lobes were yellow, edged with orange, and marked with broad dusky bands;

two, were of a nearly uniform pale yellow; and the other, a pale green, edged with orange. They appeared to be very lively in their habits; and I suppose, they found sufficient food for their carnivorous appetites, amongst the Fuci and Zoophytes which were in the bowl. It has been previously observed, that some of the Gasteropods have the power of forming a mucus thread, by which they are capable of suspending themselves in the water; but as far as I can learn from Mr. Alder, and my own researches into the subject, such has never been observed in regard to the *Cypræa Europæa*; to this point alone I wish to refer. Sometimes, I would find one or more, apparently enjoying themselves, floating upon the surface of the water, at another, one or more would be suspended two or three inches deep, the mucus thread being attached to the side of the vessel, and more than once, I have seen them dart with unerring certainty, from their point of adhesion, to one of the stones at the bottom of the bowl; and the rapidity with which this was effected, is only equalled, by the rapid suspension of a spider, when detached from the hand, or any other body it may be upon. The ladder thus formed, continued intact on one occasion, for two days, during which period, the animal ascended and descended, more than once, along its frail structure; this, I believe, has not been hitherto noticed. I trust I may be fortunate enough during the present year to obtain a sufficient number of specimens, to confirm these passing remarks, and make them more worthy of a place amongst our transactions.

Beadnel, May 27th, 1858.

Totanus Glottis. Cinereous Godwit.

Two specimens, male and female, in mature plumage, of this rather rare visitant were shot on the banks of the Aln, on the 27th of August last. They are now in the collection of Mr. Henry Gibb, jun., of Alnwick.

Acherontia Atropos—Death's Head Moth.

A beautiful female specimen of this moth was sent to me on the 15th of July last. It was captured about two miles from land, on the sail of one of our fishing cobs. Since then, five caterpillars of the same moth, have been sent; one of which has passed into the chrysalis state.

Locusta Migratoria. From the number of specimens forwarded to me, and observed by myself this season, I am inclined to believe it is about to become a permanent resident with us.

Cataractes Skua, Cataractes Pomarinus, Cataractes Richardsonii. Specimens of each of these species have been

obtained by me here, during the autumn; *C. Richardsonii* for the first time. The specimen of *Cataractes Pomarinus* in its adult plumage, the others are immature.

Scolopax Major—Solitary Snipe. A specimen of this rare species was shot a few weeks ago at East Bolton, near Alnwick.

Beadnel, October, 1858.

Notice of the capture of Vanessa Antiopa, and Colias Edusa, in the northern part of Northumberland, in the Autumn of 1858. By P. J. SELBY.

In the first week of September I was informed by my Gardener that a butterfly, with wings of a dark uniform colour with a deep border of yellowish white, had made its appearance in the garden at Twizell, and was observed in company with numerous specimens of *Vanessa atalanta* to feed upon the decaying gooseberries which had fallen to the ground. From his description, I felt assured it must be the *Vanessa antiopa* (Camberwell beauty), making for the first time, so far as I can ascertain, its appearance in this northern locality. Watching the place where it was first seen, it soon returned and was secured with the net. On the following day another beautiful example was captured near the same spot, and I have also ascertained that two specimens of the same species were taken during the same week at Belford, about three miles north of Twizell. The fine condition of these individuals shewed that they had been very recently excluded from the chrysalis, and it seems to lead to the conclusion that they must have undergone their transformation from the egg to the Imago in this locality.

I have also to record the capture of another species equally rare, if not more so, in the north of England, viz: a fine fresh male example of the *Colias Edusa*, which was taken upon the moor between Belford and Chatton on the 20th of September, and presented to me on the following day by a lady, into whose hands it had fortunately fallen.

Query.—Are we to attribute this unwonted northern distribution of these rare and beautiful insects to some peculiar influence in connection with the hot southern summer of 1857?

List of Berwickshire Spiders. By JAMES HARDY.

The present communication contains the results of occasional attention paid to the Berwickshire Spiders. It is, doubtless, far from complete, from my having collected principally near the hibernating period, and from the ground examined being

restricted almost to this immediate neighbourhood. The specimens were transmitted from time to time, to Mr. Blackwall, the well-known British authority in this neglected branch, and none have been admitted that have not passed his careful scrutiny.

In marking the localities, I use the terms "moor" and "wood" to refer to the moor and wood adjacent to this place. Where no place is mentioned the species were found near to Penmanshiel. Ewelairs is a sandy sea-bank, at no great distance north-west from the mouth of the Pease burn. A number of species that in Wales frequent the woods, or shelter themselves among the rocks on the mountains, are here assembled on the sea-shore, dwelling in crevices amongst the sand, or about the roots of the sea-reeds and other grasses. This list does not comprise all the species I have seen in the district. I have lost several collections from not being able to preserve them in a good state. The arrangement is that of Mr. Blackwall's Catalogue in the *Annals and Magazine of Natural History*, second series.

1. *LYCOSA AGRETYCA*. This, one of the largest of our *Lycosæ*, is found beneath stones on the moor, and also at the roots of grass at the Ewelairs, almost close on the sea-beach. I found several hybernating in peat *lags*, between dry layers of peat, which separate like pieces of felt, and furnish a very snug retreat. It is very voracious. Happening to place one along with various other large spiders in a box, it exterminated the whole, and when I looked in, it was running about like a dog with one of them in its mouth. I have often been amused at seeing other spiders, even though their lives were in jeopardy, when shaken from a branch, seizing hold of the readiest prey, and making off with it, as if nothing was the matter.

2. *LYCOSA PICTA*. This fine species is scarce with us. On the 21st of September, 1858, I met with three or four beneath stones on the sand at the Bents, near the mouth of Cockburnspath burn. Some years since I obtained one on the links below Oxwell-mains in East Lothian. It is not uncommon at South Shields, where it lurks in a hole in the sand, whence it sallies out occasionally to wander about on the smooth surface, which it imprints conspicuously with a devious track, like that of a weasel on snow.

3. *LYCOSA SACCATA*. Common.

4. ——— *OBSCURA*. Common.

5. ——— *EXIGUA*. Common.

6. *HECAERGE SPINIMANA*. By the borders of the rivulet in Sisterpath dean, beneath ferns and wood-rush. May the 3rd, 1849.

7. *SALTICUS SCENICUS*. Common.
8. ——— *CORONATUS*. Wood, September, 1858.
9. *THOMISUS CRISTATUS*. Common.
10. ——— *CINEREUS* of Koch. A single example determined by Mr. Blackwall to be this species, was found in September, 1858, crossing a road on the moor. I beat another from furze in 1849. It is unrecorded as British.
11. ——— *PALLIDUS*. Under a stone in Penmanshiel wood, April the 28th, 1849.
12. ——— *VERSUTUS*. Adult and immature at the roots of grass; Ewelairs, October the 26th, 1858.
13. ——— *TRUX*. Beneath stones on the moor, and in moss at the roots of heath. September, 1858.
14. *PHILODROMUS CESPITICOLIS*. Common on furze and juniper.
15. *DRASSUS ATER*. Scarce. Concealed among sand and soil at the roots of grass; Ewelairs, October the 26th, 1858.
16. ——— *SYLVESTRIS*. Moor and at Ewelairs.
17. ——— *CUPREUS*. Moor, and on the coast beneath large stones on the beach at Eastern hole, near Ewelairs. April—October.
18. ——— *NITENS*. Ewelairs, September.
19. *CLUBIONA HOLOSERICEA*. Under bark, wood, and among sand; Ewelairs. May—October.
20. ——— *AMARANTHA*. Ewelairs, September.
21. ——— *BREVIPE*. Wood, September.
22. ——— *COMTA*. Wood, September.
23. ——— *ACCENTUATA*. Wood, September.
24. *CINIFLO ATROX*. Under bark, stones on walls, occasionally in houses, and also among sand at the sea-coast. Common.
25. *ERGATIS BENIGNA*. Twigs of heath, Moor, September.
26. *AGELENA BRUNNEA*. September.
27. *TEGENARIA CIVILIS*. This is our common domestic spider.
28. *TEXTRIX LYCOSINA*. A littoral species with us; rocks at Ewelairs, Greenbeugh, &c.
29. *THERIDION LINEATUM*. Roots of grass, September.
30. ——— *NERVOSUM*. In a young state on furze, December, 1848.
31. ——— *VARIEGATUM*. Ewelairs, September.
32. ——— *FILIPES*. September, 1858.
33. *LINYPHIA MONTANA*. Moor, September.
34. ——— *MARGINATA*. Furze, &c., Wood, May and September.

35. *LINYPHIA PRATENSIS*. On furze, May, 1849, and again among grass, Ewelairs, September, 1858.
36. ——— *RUBEA*. Wood, December and September.
37. ——— *MINUTA*. Wood, September.
38. ——— *SOCIALIS*. Wood, December and September.
39. ——— *ALTICEPS*. September.
40. ——— *LONGIDENS*. Under stones; Common; Wood and Moor.
41. ——— *TENUIS*. September.
42. ——— *TERRICOLA*. September.
43. ——— *INSIGNIS*. September.
44. *NERIENE MARGINATA*. Ewelairs, October 26th.
45. ——— *BICOLOR*. September.
46. ——— *LIVIDA*. Stones in wood and on moor; May, September, and December.
47. ——— *RUBENS*. Moor and at Ewelairs, September.
48. ——— *LONGIPALPIS*. September. One of the producers of gossamer.
49. ——— *AGRESTIS*. Ewelairs, September.
50. ——— *TRILINEATA*. Ewelairs, September.
51. ——— *RUBELLA*. Wood, September.
52. ——— *RUBRIPES*. Beneath a stone, Penmanshiel wood, May, 1849.
53. *WALCKENAERA ACUMINATA*. Under stones, wood, &c. May and September.
54. ——— *CUSPIDATA*. Under moist stones, moor, &c., April and September.
55. ——— *HARDII*, Blackwall, Ann. and Mag. Nat. Hist., 2nd ser., vi. p. 340. I found this Dec. 14, 1848, beneath stones on the moor, in moist situations, and again in the same locality in September, 1858.
56. ——— *OBTUSA*. September.
57. ——— *DEPRESSA*. September.
58. ——— *PUMILA*. September.
59. *PACHYGNATHA CLERCKII*. Ewelairs, one specimen, September the 21st, 1858.
60. ——— *DEGEERII*. Not uncommon. Moor and at Ewelairs, April and September.
61. *EPEIRA APOCLISA*. Furze, September.
62. ——— *CALOPHYLLA*. Furze, &c., December and September.
63. ——— *CUCURBITINA*. Wood, September.
64. ——— *ANTRIADA*. Among ivy and shady bushes. Red Clues Cleugh and Kitchencleugh. September.

65. *EPEIRA INCLINATA*. Very common in woods on hazels, &c.; also on furze, &c.

66. ——— *DIADEMA*. Common.

67. *TETRAGNATHA EXTENSA*. On rushes, at Moss Maw, also near Swinton hill, May and September.

68. *DYSDERA HOMBERGII*. In crevices of sand and soil at the roots of *Ammophila*. Bents and Ewelairs, April and October.

69. *SEGESTRIA SENOCULATA*. Beneath stones on walls, and in fissures of rocks at the coast, December and September.

70. *OONOPS PULCHER*. This small scarlet spider is not rare among sand at Ewelairs. In Lancashire and Wales it occupies the crevices of walls and rocks, or hides under tree-lichens in woods, September and October.

The Geology and Archæology of Beadnell, in the County of Northumberland, with a description of some Annelids of the Carboniferous Formation. By GEORGE TATE, F.G.S.

When the Berwickshire Naturalists' Club met at Beadnell in May 1858, a party examined the rocks on the neighbouring coast, and the ruins of an ecclesiastical edifice on Ebbs Nook; and as both the ancient chapel, and yet more ancient rocks present many points of interest to the Antiquarian and the Geologist, I now lay some account of them before the Club.

GEOLGY.

A section along the coast from Ebbs Nook to Annstead Bay, of nearly one and a half miles in length, exhibits a fine series of rocks belonging to the Mountain Limestone Formation. Thick sandstones and limestones, shales with ironstone, and coal seams are intercalated with each other; and these strata are traversed by a lead vein and a basaltic dike. As we wander along the shore, we meet with evidences of sea deposits in the limestones and calcareous shales, wherein are embedded many corals and mollusks; the sandstones and other shales, and the coal afford relics of the vegetation of the Carboniferous Era; some slaty sandstones give distinct indications of shallow seas and ancient coast lines, whereon the waves broke gently and over which worms crawled; and the basaltic dike tells of the play of internal forces, rending asunder the vast mass of stratified rocks, and pouring molten lava into the fissures.

Stratified Rocks.—The general dip of the strata is south-east about 15°, and as we proceed northward we pass over

the lower beds in succession. There are a few dislocations and faults, and in some parts the limestones are thrown into wave-like ridges and hollows; but the contortions are not so remarkable as at Howick, Holy Island, and Scremerston. As the greater proportion of the middle group of the mountain limestone rocks is seen here, the following section will be instructive, giving, as it does, the strata in detail from the highest at Ebbs Nook, down to the lowest which have been reached by pit sinkings in the neighbourhood. It has been made out by repeated examinations of the coast, collated with information derived from pit sinkings, which has been kindly supplied to me by my friend, Mr. William Wilson, the intelligent manager of the Shilbottle Colliery. The lower strata from number 68 downward are taken entirely from pit sections.

SECTION.

	ft. in.		ft. in.
1. Ebbs Nook Magnesian limestone, containing <i>Productus giganteus</i> , <i>Spirifer lineatus</i> , <i>Chætetes septosus</i> , <i>Lithostrotion</i> , <i>basaltiforme</i> , <i>Syringopora ramulosa</i> , &c...	30 0	Brought forward.....	193 8
2. Red flaggy sandstone, ripple-marked	4 0	13. Sandstones, some blotched and red, others flaggy; <i>Stigmæria ficoides</i> in upper beds, annelids in flaggy beds	24 0
3. Shale, reddish at top, darker and carbonaceous in lower beds	20 0	14. Shale with ironstone nodules	15 0
4. Coal	1 2	15. Limestone, generally blue—the basaltic dike cuts through these beds near the shore.....	18 0
5. Fire clay and shale	7 0	16. Coal.....	0 6
6. Flaggy sandstones, micaceous along the laminæ, with borings of annelids	30 0	17. Grey shales with ironstone nodules	10 0
7. Shale	5 0	18. Blue shales.....	15 0
8. Sandstones with ripple marks, false bedding, and worm casts and trails	40 0	19. Grey slaty sandstone	5 0
9. Shales	27 0	20. Coal (<i>stony coal</i>)—this is very nearly in the same position in the series as the fine Shilbottle seam	1 0
10. Limestones, generally blue, some beds dun and weathering buff; a calcareous shale 2 ft. 6 in. is interstratified— <i>Productus giganteus</i> , <i>Aulophyllum fungites</i> , &c.....	28 0	21. Slaty sandstones	8 0
11. Coal mixed with shale	0 6	22. Blue slates	7 0
12. Arenaceous shale	1 0	23. Slaty sandstones and shales—some beds are ripple marked, and the vein of Galena is seen crossing the sandstone	37 0
Carried forward ..	193 8	24. Shales	10 0
		25. Limestone, dark	6 0
		Carried forward...	353 2

	ft. in.		ft. in.
Brought forward...	350 2	Brought forward...	686 1
26. Grey slaty sandstones and shales	27 0	51. Dark shale	18 0
27. Calcareous shale with many fossils	3 0	52. Limestone	14 0
28. Limestones which are much contorted—the upper beds are impure, but the middle and lower make good lime. These beds were, until lately, worked here, and also at North Sunderland where they are brought in, through the undulations and faults of the strata. They are very fossiliferous	24 0	53. Coal	0 4
29. Coal	0 8	54. Grey sandstones and slaty sandstones	9 0
30. Fire clay and shales	10 0	55. Limestone	5 0
31. Sandstone, upper beds slates	30 0	56. Coal (Swinhoe coal)	1 4
32. Carbonaceous shales with ironstone nodules	10 0	57. Sandstones	27 0
33. Limestone, dun and impure— <i>Productus giganteus</i>	4 0	58. Grey shale	9 0
34. Carbonaceous shales	12 0	59. White sandstone	12 0
35. Coal (Beadnel coal). Varies in thickness from 2 feet 6 inches to 6 feet—the average is about	3 0	60. Blue shale	36 0
36. Sandstones and slaty sandstones with <i>Sigillaria organa</i>	17 0	61. Limestone, impure	6 0
37. Coal	1 5	62. Coal	0 9
38. Grey slaty and flaggy sandstones	45 0	63. Fire clay and shales	24 0
39. Shales	8 0	64. Coal (Fleetham coal, of good quality)	1 6
40. Grey slaty sandstone	6 0	65. Sandstones	132 0
41. Shales	10 0	66. Blue shales	33 0
42. Sandstones, some of the beds red	38 0	67. Sandstone	21 0
43. Grey shales	22 0	68. Limestone	21 0
44. Limestone	2 6	69. Coal	0 4
45. Grey slaty sandstones	6 0	70. Slaty sandstones and shales	60 0
46. Fire clay and shales	30 0	71. Coal	0 10
47. Coal (<i>stone close coal</i>)	1 4	72. Fire clay	48 0
48. Grey slaty sandstone	10 0	73. Limestone, light coloured	6 0
49. Dark shale	5 0	74. Coal mixed with sandstone	2 0
50. Slaty sandstone	10 0	75. Shales and slaty sandstone	15 0
		76. Limestone, impure	2 0
		77. Coal	2 0
		78. Sandstones	150 0
		79. Slaty sandstone	30 0
		80. Blue shale	6 0
		81. Hard stone	4 0
		82. Sandstone, coarse white	15 0
		83. Blue shale	12 0
		84. Coal, good	1 8
		85. Slaty sandstones	27 0
		86. Coal (main coal)	4 0
		87. Fire clay	5 0
		88. Blue shale	42 0
		89. Limestone	4 0
Carried forward...	686 1	Total...	1493 10

There are in this section fourteen different limestones, varying in thickness from 2 feet to 30 feet, and having an aggregate thickness of 171 feet. Most of them are of a bluish colour and yield good lime, and many fossils characteristic of the Mountain Limestone Formation occur, especially in the thicker sills and in the calcareous shales connected with them. The main limestone, number 28, is the most fossiliferous, and the following list, though far from being complete, will shew how rich it is in organic remains.

FISH.

A few remains of fish appear, viz., a portion of

Megalichthys Hibberti (Ag.) consisting of scales of a quadrate form, one inch across—this was a sauroid fish allied to the *Lepidosteus* or Bony Pike.

Cladodus mirabilis (Ag.)

Cochliodus magnus (Ag.)

These are teeth of Ganoid fish of the order Pycnodonti, whose forms were short and compressed, the fins small, and the teeth adapted to crush marine animals with hard coverings.

CRUSTACEUS.

Griffithides Farnensis (Tate).

MOLLUSKS.

Orthoceras sulcatum (Flem.)

Orthoceras Goldfussianum (Kon.)

Naticopsis plicistriæ (Phil.)

Loxonema rugifera (Phil.)

Euomphalus carbonarius (Sow.)

Pleurotomaria decipiens (McCoy)

Pleurotomaria atomaria (Phil.)

Platyschisma helicoides (Sow.)

Bellerophon Urii (Flem.)

Orthis resupinata (Mart.)

Orthis Michelini (Kon.)

Strophomena crenistria (Phil.)

Productus Martini (Sow.)

Productus punctatus (Mart.)

Productus scrabicultus (Mart.)

Productus spinulosus (Sow.)

Productus fimbriatus (Sow.)

Productus latissimus (Sow.)

Productus Flemingii (Sow.)

Productus semireticulatus (Mart.)

Chonetes sordida (Sow.)

Chonetes Dalmaniana (Kon.)

Chonetes gibberula (McCoy)

Spirifer trigonalis (Mart.)

Spirifer glaber (Mart.)

Spirifer lineatus (Mart.)

Spirifer octoplicatus (Sow.)

Edmondia sulcata (Phil.)

Sanguinolites iridinoides (McCoy)

Sanguinolites transversa (Port.)

Sanguinolites variabilis (McCoy)

Aviculo-pecten docens (McCoy)

BRYOZOA.

Fenestella plebeia (McCoy)

Fenestella crassa (McCoy)

Fenestella undulata (Phil.)

Glauconome pluma (Phil.)

Sulcoretopora parallela (Phil.)

CORALS.

Aulophyllum fungites (Flem.)

Lithodendron irregulare (Phil.)

Stenopora tumida (Phil.)

Favosites parasitica (Phil.)

Favosites serialis (Port.)

The calcareous shale is remarkably full of fossils; it is indeed almost entirely formed of *Productus Flemingii* and *Spirifer trigonalis*; and being exposed to the weathering influence of the tide, which washes away the softer matrix, the fossils stand out in bold relief, and fine specimens of the *Productus* can be obtained, beautifully shewing the curious internal structure of the shell.

The limestone which forms the bold headland of Ebbs Nook is, however, the most interesting of the group, from its peculiar

organisms, its mineral composition and picturesque appearance. It is 30 feet in thickness, and being very hard, resists more effectively, than the other rocks, the destructive action of the sea. Resting, however, on a soft shale which is easily broken up and washed away by the tides, this superincumbent limestone is deprived of support, and time after time, large masses tumble down from the cliff into the sea. It now forms a narrow point running into the sea about one quarter of a mile; but the tides and high seas are still working away the lower and softer beds, which connect this promontory with the land, and in the course of a few centuries it will become an island on the flow of every tide. This limestone is of a buff colour and generally of a crystalline structure. It is a magnesian limestone, being composed of carbonate of magnesia and carbonate of lime. Besides containing *Productus giganteus* and other commoner mountain limestone fossils, there abound in it large masses of the corals *Lithostrotion basaltiforme* and *Chætetes septosus*; and occasionally we find *Syringopora ramulosu*, which is a rare coral in the Northumberland beds. These distinctive organisms are excellent guides in tracing the range of this sill; northward I have found it at Holy Island, and southward I have traced it to Spittleford, near to Embleton, and thence to Dunstan, Craster, and Shilbottle; and thence in a south-west direction to Whittle, Newton-on-the-Moor, Framlington, and across the Coquet to Ward's Hill and Rothley. It should be noticed, that the magnesian character of this limestone is a local phenomenon, and seems in some way to arise from its neighbourhood to basalt. In several parts of its range, as at Shilbottle and Framlington, it is a comparatively pure carbonate of lime.

There are eighteen different coal seams in the section; most of them are thin and of an inferior quality, none, excepting two, exceeding 2 feet in thickness, and their aggregate thickness is only 24 feet 4 inches. That which is called the Beadnell coal (number 35 of the section) has been worked both for domestic use and for burning lime. It is of variable thickness, seldom less than 2 feet 6 inches, and generally about 3 feet; but on Mrs. Taylor's estate, it has been found as much as 6 feet thick, and of a better quality than in other localities. It lies there, however, below the sea level; and as the sea sometime ago broke into a neighbouring colliery, due precautions would be necessary, to prevent a similar irruption, in the event of this more valuable portion of the coal seam being worked for the use of the district.

The sandstones and shales associated with the coal seams contain relics of the vegetation of the Carboniferous Era; a few *Sigillariæ* and many *Stigmaria ficoides* appear in these beds. One interesting specimen of a *Sigillaria*, which was laid bare, when quarrying the sandstone in 1853, deserves a more particular notice. Though but a fragment, it was 6 feet in height, and 2 feet 2 inches in diameter at the lower end, and 1 foot 9 inches at the higher; it stood perpendicular to the strata which dip south-east 15° and its inclination to the horizon was 75° . The lower extremity terminated abruptly on the surface of slaty sandstone beds, but the outcrop of the rock in which it was embedded prevented our knowing, how far upward it extended. Over the surface was a thin carbonaceous coating, being the bark converted into coal; but the interior was replaced with sandstone and retained no structure. It had, however, the rude flutings which distinguish the casts of *Sigillariæ*; and it appeared to belong to the species *Sigillaria organa*. The sandstone in which it stands consists of several beds; and the lines of stratification distinctly pass through the fossil, and curve more or less downward on all sides towards it. No roots could be observed attached to this tree; yet from its position at right angles to the strata, and the peculiarity of the stratification, I think it stands on the spot where it originally grew. Indeed, there seems to me little doubt that most of the coal seams, even in north Northumberland, have been formed of plants and trees which grew, during the Carboniferous Era, in the district now occupied by the coal beds. The under clay usually beneath each coal seam was the surface soil, on which the plants and trees grew; and it is now found more or less traversed by the *Stigmaria ficoides*, which was the root of the *Sigillaria*, the trunks of which have largely contributed to the formation of the coal. As this fossil tree is frequently to be seen in Northumberland, it may add to the interest of these notes to give the following description from my Fossil Flora of the Eastern Borders. "The structure of the *Sigillariæ* differs widely from that of any living plant; it is, however, essentially acrogenous; and the nearest analogue to these majestic trees of other times is the Lycopod or lowly creeping club moss; yet the radial arrangement of the woody tissue and the presence of medullary rays and a sheath, bring them into a distant relationship to exogenous vegetation. Brongniart considers them allied both to the Lycopod and to the *Cycas*; they form, therefore, a connecting link between orders, which stand far apart in existing nature. Composed

chiefly of cellular tissue, *Sigillariæ* were extremely succulent ; they grew in swamps and marshes, their long and numerous *Stigmaria* roots and rootlets forming an entangled mass and permeating the mud in all directions, in a manner similar to that of the living water lily in shallow lakes and pools. The roots sometimes exhibited a crucial arrangement, uniting into four main portions, separated from each other by deep channels and forming a dome from the summit of which, the furrowed and scarred stems, clothed in the upper parts with a long, narrow and pendent foliage, rose to the height of nearly 100 feet.*

Other conditions of the Carboniferous Era are made known by several of the sandstones, which present ripple-marks, oblique lamination, and fossil worms and worm tracks, indicating ancient beaches and the action of waves and currents. When deposits are made in water comparatively tranquil, the planes of the several beds are pretty nearly parallel to each other ; but some sandstones exhibiting in mass this ordinary stratification have also included in them, thin layers or stratula, which are inclined sometimes highly to the plane of the principal bed ; this is oblique lamination, or as it is frequently called, *false-bedding*, of which there are many examples in the Beadnell sandstones. Both ripple-marks and false bedding result from the action of waves and currents—the former being produced by the gentle motion of waves, and the latter by stronger currents. After the recession of the tide furrows and ridges may be seen on sandy and muddy coasts ; and these are similar in form and arrangement to those left impressed by ancient waves on the Beadnell sandstones ; where they are there beautifully distinct ; some of them are large, measuring 6 inches from one ridge to the other ; and they usually trend from east by south to west by north. As the line in which a current moves is at right angles to the direction of such marks, the ancient currents which rolled over the Beadnell coast must have come either from the north or the south.

Mr. H. C. Sorby has attempted to determine the direction whence currents came, by observations on the dip of the stratula, as he considers the direction to be the opposite to this dip in relation to the plane of true bedding ; and he concludes from a series of observations, that the drifting current which formed the coal sandstone beds on the southern part of the coast of Northumberland came from north 9° east.† The

* Tate's Fossil Flora of the Mountain Limestone Formation in Dr. Johnston's Botany of the Eastern Borders, p. 299.

† Proceedings of the Yorkshire Geological Society for 1852, p. 232.

Beadnell beds, however, do not lead to any such general conclusion; for I found in the same stratum, and within a distance of not many yards, that the *Stratula* in one place dipped from 40° to 70° to the north, and in another place at similar angles to the south-west by south. Probably this bed had been formed by the action of strong eddies and counter currents, which piled up the drifted sand with considerable irregularity.

FOSSIL ANNELIDS.

Most curious and instructive are the fossil worms and tracks which occur in several layers of flaggy and ripple-marked sandstones a little northward of Ebbs Nook. They are seen also in other sandstone beds of the section, and in other localities in Northumberland. Though similar annelids are not unfrequent in Palæozoic rocks, they have been but seldom noticed. Species from the Silurian Formation have been described by Sir Roderick Murchison in his great work on the Silurian System, by Professor McCoy in Sedgwick's *Synopsis of the Classification of British Palæozoic Rocks*, and by Mr. J. W. Salter in the *Quarterly Journal of the Geological Society*. Few distinct descriptions have been given of forms in the Carboniferous Formation; the only notices I know of are contained in a paper by Mr. E. W. Binney on some trails and holes formed in rocks of the carboniferous strata;* and in an excellent popular "Account of a large fossil marine worm occurring in the mountain limestone district in Wensleydale, Yorkshire," by Mr. Edw. Wood, F.G.S.† Mr. W. Lee also refers to annelid borings, in a paper on what he calls Fossil Footprints in the carboniferous system.‡ Having carefully examined the annelids in the Mountain Limestone Formation of Northumberland, I am able to distinguish four distinct forms; two of them are referable to

CRASSOPODIA, (McCoy),

A Genus which has been found in Silurian beds and which may be thus defined:—Body long; of excessively short, numerous, wide segments, from which arise very long, delicate, crowded cirri forming a broad dense fringe on each side, completely concealing the feet. These annelids appear to belong to the order *Dorsibranchiata* of Cuvier, and are allied to the nereides, species of which inhabit our coast. They are

* *Memoirs of the Manchester Philosophical Society*, vol. x., p. 181.

† *The Naturalist*, Nos. I. and II., p. 14 and 41.

‡ *Proceedings of the Yorkshire Geological Society*, vol. ix., p. 409.

marine worms which creep in a serpentine manner, and even swim by successive undulations of their bodies or by agitating their appendages.

CRASSOPODIA EMBLETONIA,* (TATE.) Plate I., fig. 1. 2.

Length unknown (upwards of two feet); width one inch; thickness not exceeding four lines; width of body five lines; articulations three lines apart; cirri about four lines long, crowded, there being twenty-four in the space of one inch. There is no appearance of a head; the width and characters are the same throughout the entire length; it occurs in large rounded loops from half an inch to more than three inches apart.

Having found sections shewing the interior of this curious fossil, I have been able to determine the width of the body, and the distance of the articulations from each other.

This is the most widely distributed of the carboniferous annelids; it occurs in sandstones of the mountain limestone at Beadnell, Scremerston, Howick, Haltwhistle, on the Irthing near Combe Crag, and also in flaggy beds of the millstone grit at Berlin Carr, between Alnmouth and the Coquet.

Fig. 1.—Upper surface; the keel-like centre is that portion of the body not covered with cirri.

Fig. 2.—Section shewing the articulations of the body; *a*, intestinal canal; *b*, muscular layer and articulations; *c*, space occupied by cirri.

CROSSOPODIA MEDIA, (TATE.) Plate I., fig. 3. 4.

Length considerable (upwards of three feet nine inches), usual width about four lines, but some specimens are only three lines and others as much as six lines wide; thickness three lines; width of body two lines; length of cirri one line and a half, and twenty of them in the space of one inch; the width and thickness continue the same throughout the entire length. It occurs in irregular loops and long undulations which occasionally cross each other.

This is quite distinct from the *C. Embletonia*, being much smaller and much thicker in proportion to its size; the cirri are less crowded and the foldings are more tortuous and irregular.

It occurs in sandstone at Beadnell, abundantly at North Sunderland, at Newton-on-the-Moor, and at Howick.

Fig. 3.—Upper surface.

Fig. 4.—Section shewing the cirri and a cast of the body.

* I have named this after my esteemed friend Mr. R. C. Embleton, the accomplished Secretary of our Club.

NEMERTITES, (MCLEAY,)

A Genus which has been described from the Silurian Formation; it is thus defined: Body very long, linear, slender, of nearly uniform thickness throughout, without distinct articulations.

NEMERTITES UNDULATA. (TATE.) Plate I., fig. 5.

Length unknown, (upwards of nine inches), body round, half a line in diameter, usually in loop folds from a quarter to half an inch apart; neither articulations nor cirri are observable.

This species is generally found where fossil worms appear; it occurs in sandstone at Beadnell, North Sunderland, Howick, and Haltwhistle.

Fig. 5. *Nemertites undulata*, accompanied with borings of other annelids; this species also is figured on Slab 6.

EIONE, (TATE,)

An annelid, very different from every other, occurs in considerable abundance at Howick, in a thick flaggy sandstone which holds a similar relative position in the mountain limestone series to some of the sandstone beds at Beadnell. This fossil too is associated with the same species of worms as are found at Beadnell. It has characters so remarkably distinct that I have provisionally given it a Generic, as well as a Specific name.

EIONE MONILIFORMIS, (TATE.) Plate I., fig. 6.

Length unknown (upwards of three feet); body rounded, lower surface and sides moderately convex, smooth, upper annulated, diameter six lines; articulations consisting of bead-shaped rings on the upper surface, distinctly separated from each other by a deep sulcation, the length of each articulation being five lines; it occurs in long undulations. Some individuals are a little larger and others a little smaller than the size stated; but each preserves the size and character throughout the entire length. I have been unable to detect any internal structure, or to observe setæ, cirri, or appendages.

This very peculiar fossil worm may be referred to Cuvier's order *Abranchiata*. Destitute of setæ and cirri, it resembles the *Hirundo* or leech, and the *Lumbricus* or earth-worm; it would progress by the contraction and extension of the subcutaneous muscular stratum.

It is found at Howick, Scremerston, and Haltwhistle in Northumberland; and I believe also in Yorkshire.

Besides the forms now described there are other casts and trails at Beadnell. Some seem to be the burrows or casts of annelids, passing either perpendicularly or obliquely through several layers of rock, the upper surface of the layers being pitted and the under projecting. These casts or burrows are about two lines in diameter, and are so crowded together in some rocks both at Beadnell and Kirkwhelpington as to give the stone a pock-marked appearance. Meandering furrows about one line in width with a ridge in the centre are probably the trails of an annelid: they occur also at Howick, North Sunderland, and Haltwhistle. It has been suggested that these were tracks made by small crustaceans, but the absence of all remains of the hard shell renders this opinion doubtful.

More extended observations on these borings and trails and on other markings associated with them, are required before their characters can be distinctly determined.

As confirmatory of the marine conditions of the rocks in which the ripple marks and annelids are found, I may add, that the flaggy sandstone containing annelids at Howick has in some of the layers *Bellerophon*, *Euomphalus*, *Murchisonia* and *Pleurotomaria*, shells undoubtedly of marine origin.

The group of facts now noticed gives us a partial glimpse of a far distant Era. The Beadnell flaggy beds expose to our view an ancient coast line; we hear the waves breaking on the shore; we perceive currents rolling along masses of sand; the tide recedes and ripple marks—long ridges and furrows sharp and distinct appear; and there too are seen worms, some of large size, crawling over the surface or burrowing in the sand. Marks left by the sea are often fugitive—the impressions made by one tide are obliterated by another; but here they are preserved; the sand and mud are hardened, it may be by a warm sun breaking forth and baking the surface before the return of the tide; other deposits cover over the markings and bury up and preserve the organic forms; and now, when these rocks are laid bare and examined, they reveal to us, that the same physical laws operated during the Carboniferous Era as at the present time, and that, though the aspects of vegetation might be wonderfully different, and organic life specifically distinct, yet the animals of the period were formed according to the same type and were subject to the same conditions as those now existing.

Before leaving the stratified rocks, allusion may be made to the illustration they afford of changes of condition and of oscillations of level. Taking the coal in connection with the limestone, there is evidence of not less than fourteen changes

of level; as many times, during the period when these rocks were deposited, was the district clothed with an abundant and marvellous vegetation—as many times were there alternations of swamps and lakes, of estuaries, of lagoons, and of seas sometimes profound, but generally of moderate depth.

LEAD VEIN.

A little northward of the basaltic dike, a narrow crack or fissure of the sandstone contains Galena or Sulphuret of Lead. It runs across the strata from south by east to north by west; and a branch from it forks off to the north-north-west. The vein seems too small to be worked with advantage. Its position gives probability to the theory that the igneous agency which forced upward the basalt, produced also, by sublimation, the ore which is found in the vein.

BASALTIC DIKE.

When viewed from the shore near to Dunstan Square, this basaltic dike, even to one unacquainted with geological principles, is a striking and interesting object. It rises perpendicularly through the stratified rocks, and runs in a direct line from west 85° south to east 85° north. Its width is 25 feet, but contracting seaward to 20 feet. It stands in some parts ten feet above the strata, and appears like a wall rudely piled up by Cyclopean builders; and though, in other parts, it is broken down by the waves, its course can be distinctly traced for a considerable distance into the sea. The basalt is of the usual composition, augite and felspar, but finer grained than the larger masses at Ratcheugh and the Farne Islands. The adjacent strata are very slightly altered in position; but their structural characters are changed. Coal for some distance from it is valueless; limestone near to it will not burn into lime; and shale and sandstone are indurated. Besides, at the point of contact, sandstones, shales, and limestones are much jointed and fissured, and assume the external form of basalt; and on the other hand, the basalt itself becomes calcareous and siliceous. This transference of qualities and the structural changes superinduced are the results of the igneous agency which, by its upward pressure, rent asunder the vast mass of stratified rocks, and then poured the molten basalt into the fissures.

ARCHÆOLOGY.

On the narrow rocky point of Ebbs Nook, overlooking the sea, stood a humble religious edifice; which, however, so long

ago became a ruin, that for many generations it was covered over with drifted sand. Mr. Hodgson Hinde, in 1853, discovered the spot where it stood, and by clearing away the sand from the interior, exposed the remains of this ancient chapel. The buildings thus brought to light consist of a chancel, nave, and another apartment on the west, opening into the nave. The chapel stands directly east and west. The sizes of the several apartments are internally—

The chancel 11 feet 5 inches by 11 feet 9 inches,

The nave 18 feet 9 inches by 11 feet 4 inches,

The western chamber, which is not regular, in shape averages 13 feet by 10 feet.

In some parts the walls are remaining to the height of 5 feet; they are usually 25 inches in thickness and built chiefly of yellow magnesian limestone, of which vast numbers of blocks are rolled by the sea to the bottom of the cliff; some few red sandstones are mingled with the limestone, and the door jambs, which are remaining, are also of sandstone. The masonry is coarse rubble work. Lime has been used to a considerable extent in the walls of the chancel and nave; but no particle of lime appears in the walls of the western apartment, which are cemented by clay only. Thick walls with wide central openings divide the western apartment from the nave, and the nave from the chancel. These walls are $2\frac{1}{2}$ feet thick; the chancel opening is 5 feet, and that between the nave and the western apartment is 4 feet 8 inches in width. There had been no door between the nave and western chamber, for the end faces of the division walls are smooth; and it is probable from the great thickness, both of these and of the chancel division walls, that they had supported arches.

It is difficult to say, what purpose was served by the western chamber. It is undoubtedly of more rude construction than the other buildings, and appears like a subsequent addition, as the side walls are not bonded into the wall of the nave; but the wideness of the opening from the nave into it, and the absence of any indications of a door rather evidence, that it forms part of the original plan of the chapel. It may have been used as a vestment room; and probably there were other buildings near to the chapel, which furnished a residence for the priest, for there are other foundations on this promontory.

Near the west end of the nave, there had been two small doors opposite to each other in the south wall. The width externally was only 2 feet 1 inch, but being splayed, they widened internally to 3 feet. When this chapel was first laid

bare, a portion of the head of the north door was found resting on its impost; the height of the door was then ascertained to be only 4 feet 8 inches. A low stone seat ran along the north and south walls of the nave, and also along the west wall on the north side of the opening. The Piscina of a rude form still remains inserted in the south wall.

Other characteristic portions of a chapel were seen when the excavations were made, but which have since been destroyed or removed. Of these, however, a minute description has been given by Mr. Albert Way, in the proceedings of the Archæological Institute.* In the chancel, an altar formed of coarse rubble work was found nearly entire, and on its north side a shallow stone trough. A small basin, supposed to have been a holy-water vessel, was in the south-east angle, and adjoining to it was a portion of a stone bench. It is singular to notice, that though the chancel walls were for the most part built with lime, yet clay has been used and no lime in that part, against which the altar stood. No windows nor architectural ornaments were found, from which the age of the chapel might with certainty have been determined. Among the rubbish, however, I saw several sand-stone slates with the nail-holes for fastening them remaining, indicating that these buildings had been covered with slate.

This ruined chapel is now only about ten yards southward from the cliff, which rises 30 feet above the sea; the chapel, however, must formerly have stood at a greater distance from it; for, as already explained, masses of limestone, time after time, have tumbled down from the cliff into the sea.

No sepulchral monuments or swelling hillocks are now around this chapel; but here there must have been a place of sepulture, for human bones are occasionally disinterred by the burrowing of rabbits; and when excavations were made lately, two human skeletons were found, lying parallel with each other, near to the south door of the chapel.

When, it may be inquired, was this chapel erected, and why placed on such an exposed situation? Mr. Albert Way thinks that "these remains encourage the supposition, that the building may have been raised at a very early period after christianity was introduced into Northumberland." The name of the promontory—Ebbs Nook—readily suggests that a chapel may have been erected here by St. Ebba, sister of Oswald and Oswi, kings of Northumberland, in the seventh century. It was not unusual in that early age to select lonely and exposed sites for chapels and cells. The sea-girt and

* Archæological Journal, No. 44, p. 498.

tempest-beaten Farne had its cell and chapel; and tradition says, that St. Ebba and St. Helen built churches on lofty headlands on the Berwickshire coast—the one on St. Abbs Head and the other near to Siccar Point; but of these early structures there are no remains. Indeed, with very rare exceptions, the Saxon erections have perished. Many of them were of wood, and consequently soon decayed; those, which were of stone, fell beneath the corroding power of time, or were swept away by the ruthless hand of war, which repeatedly ravaged Northumberland. The remains of the chapel on Ebbs Nook possess no distinctive mark of a Saxon building; doubtless it is small and rude in structure, but these characters belong to all periods. When I first visited it, I saw a portion of the head of the north door, which has however since then disappeared; and I considered, that the curve in it was a part not of a rounded but of a pointed arch. While therefore it is probable, that in Saxon times a chapel stood here, it may be, to attract especially the devotions, vows, and offerings of seamen, that first structure has entirely disappeared, and the remains now on Ebbs Nook belong to an edifice, which had been erected not earlier than the thirteenth century.

Catalogue of the Land and Fresh-water Mollusca found in the immediate neighbourhood of Alnwick, in Northumberland. By GEO. RALPH TATE, M.D., Royal Artillery.

The following catalogue of land and fresh-water mollusca is the result of observations made, in the neighbourhood of Alnwick, during the months of August, September, and October 1857. From the short space of time devoted to this interesting branch of natural history, many species have doubtless escaped observation, and especially those inhabiting our rivers, ponds, and ditches which have been but slightly examined. The genera *zonites* and *helix* have been more particularly studied, and have in consequence yielded proportionately a large number of species.

n Of planorbis, ~~limæa~~, and other fresh-water forms, there are fewer in the district than in most parts of England; this is partly owing to the comparative absence of slow running streams and low lying ponds.

4 From the varied character of the country, the district is, on the whole, favourable to the production of land shells. Large tracks of wood, watered by swift flowing streams, and presenting a beautiful alternation of hill and vale, afford a congenial habitat for the shelter loving species.

The richest localities are those where limestone occurs, as at Ratcheugh Crag and the Calish woods, this rock furnishing the lime of which the external covering of the mollusca is for the most part composed. Particular plants, moreover, afford a resting place to many species. Equisetums and grasses, which contain a large per centage of earthy salts, are much frequented by land shells. Many mollusca, in the same way as plants, are found in every situation and on every variety of soil, while others again affect particular habitats.

The geological peculiarity of a district influences the distribution of land shells much more, in England at least, than geographical position. All of the forms found near Alnwick are, with one exception, (*Helix lamellata*), observed in Hampshire, at the opposite extremity of the country. Those peculiar to this southern part of England, and which are not observed in the north, flourish on a cretaceous soil; among those may be enumerated, *Cyclostoma elegans*, *Bulimus acutus* and *Helix cantiana*.

The fact that mollusca pass a large portion of their time in winter in a state of hybernation, when the influence of climatal peculiarity is scarcely felt, accounts perhaps for the absence of any striking difference in the fauna of two opposite extremities of this country.

MOLLUSCA.

CLASS I.—GASTEROPODA.

ORD.—PNEUMONOBANCHIATA.

FAM.—HELICIDÆ.

GENUS—VITRINA, Drap.

1. *V. pellucida*, Müll.

Common under stones, among moss and decaying leaves.

Ratcheugh, Hulne, Rugley woods, &c. Live specimens are most frequently met with after a shower of rain and in damp weather.

GEN. ZONITES, Gray.

The species of this difficult genus are not easily distinguishable; but having carefully examined a considerable number of specimens, I venture to give specific descriptions from my own observations, in the hope of facilitating the determination of the species.

2. *Z. cellarius*, Müll.

One of our common shells. Beneath stones, about old walls, among grass in woods, fields, and occasionally in damp cellars. Ratcheugh, &c. Shell flattened with

the spire very little raised ; colour dirty yellow or pale horn ; glossy ; upper surface rather opaque, under surface clouded with opaque white, especially about the umbilicus ; smooth or slightly wrinkled ; whorls 5 to $5\frac{1}{2}$; umbilicus moderately large, scarcely exposing the second whorl ; aperture obliquely crescent-shaped, rather broader than high ; diameter 2-5ths to $\frac{1}{2}$ an inch.

3. *Z. alliarius*, Müll.

A widely-diffused shell, but not so common as the last, and readily distinguished from it and the other species of this genus, by the odour of garlic which the animal emits when disturbed. It frequents the same habitats as the last. Ratcheugh, &c.

Shell flattened, with the spire very little raised ; colour pale amber or horn ; transparent ; very shining ; around the umbilicus there is a little opacity ; upper surface smooth or but slightly wrinkled ; whorls $3\frac{1}{2}$ to 4 ; umbilicus moderately large, scarcely exposing the second whorl ; aperture crescent-shaped, not very oblique, rather broader than high ; diameter 1-5th to $\frac{1}{4}$ of an inch.

4. *Z. nitidulus*, Drap.

Not so frequent as either of the preceding, yet by no means an uncommon shell. Under stones, about old walls, among grass and moss in woods and hedgerows. Ratcheugh, Hulne woods, &c.

Shell flattened with the spire somewhat raised, (more so than either of the preceding) ; colour, that of horn, and a shade or two darker than that of *Z. cellarius* and *alliarius* ; not shining, but dull and semi-transparent above ; more transparent below, except about the umbilicus, where there is a feint band of opaque white ; upper surface irregularly wrinkled or striated ; the striae interrupted by the sutures and not continued from whorl to whorl ; whorls $4\frac{1}{2}$ with the suture well defined ; umbilicus large, exposing the second whorl ; aperture crescent-shaped, a little oblique ; rather broader than high ; diameter 3-8ths to 3-10ths of an inch.

5. *Z. radiatulus*, Alder.

There are several localities for this minute and well-marked species around Alnwick. Its favourite habitat is among the moss and grass in damp pastures, under stones and among moss and grass in woods. Rat-

cheugh, Hulne woods, &c.

Shell flattened, spire scarcely raised ; colour, deep horn or amber ; shining, transparent ; under surface without any white opacity ; upper surface regularly and distinctly striated, the striæ continued from whorl to whorl and not interrupted by the sutures ; under surface smooth ; whorls $3\frac{1}{2}$ to 4, flattened, particularly above ; body whorl much larger than that preceding it ; sutures shallow and broad from the arching upwards of one whorl to join that next to it ; umbilicus moderately large ; aperture oblique, crescent-shaped, broader than high ; diameter from 1-12th to 1-6th of an inch.

6. *Z. purus*, Alder.

Not uncommon among moss, decaying leaves, stumps of trees and under stones in woods and pastures.

Ratcheugh, Hulne, and Rugley woods, &c.

Shell flattened, with the spire very slightly raised ; colour, white, rarely very pale amber ; transparent, not very shining ; under surface without opacity ; upper surface smooth or slightly wrinkled ; whorls $3\frac{1}{2}$ to 4, rather flattened above ; body whorl much larger than that preceding it ; sutures well defined, deep and narrow ; umbilicus moderately large ; aperture oblique, crescent-shaped, broader than high ; diameter 1-10th to 1-6th of an inch.

7. *Z. crystallinus*, Müll.

Common among moss, herbage, decaying leaves, and under stones in woods, pastures and hedge-rows.
Ratcheugh, Hulne woods, &c.

Shell flattened, with the spire very slightly raised ; colour white or with a slight greenish tinge ; very shining and transparent ; under surface without opacity ; upper surface smooth or slightly wrinkled ; whorls $4\frac{1}{2}$ to 5, of gradual increase, the body whorl being but little larger than that preceding it ; whorls flattened above ; sutures well defined ; umbilicus very small ; aperture not very oblique, crescent-shaped, about as broad as high ; diameter from 1-12th to 1-8th of an inch.

8. *Z. excavatus*, Bean.

Very rare. Hulne woods about the decaying stumps of trees.

Shell depressed, subglobular ; colour that of darkish horn ; shining and transparent ; under surface not obscured

by any white opacity; upper surface strongly and regularly striated, the striæ being continued over the base but not so well defined on this aspect; whorls 5 to $5\frac{1}{2}$, well rounded, especially on the inferior surface; umbilicus very large and capacious, disclosing all the whorls; aperture rather small, orbiculo-lunate, as broad as high; diameter $\frac{3}{4}$ of an inch.

GEN. HELIX, Drap.

9. *H. aspersa*, Müll.

This is one of our commonest and most generally known snails. It is a pest in gardens, devouring vegetables, particularly cabbage, with the greatest avidity. This species, as well as the common slug, is still used by some, in this part of the country, in their domestic pharmacopœia, and is put great trust in for the cure of pulmonary complaints. So far as my own experience goes, and from what I have been able to learn from others, it does not appear to be a remedy of any efficacy. Like many other articles of a peculiar and out-of-the-way character, a dose of snail may be productive of good, provided the patient indulging in its use is firmly convinced of its salutary powers.

10. *H. arbustorum*, Linn.

A handsome shell, but rare near Alnwick. Hulne woods and at Alnmouth, where it is found upon reeds by the side of a ditch.

11. *H. nemoralis*, Linn.

Common. Very plentiful on the Links by the sea shore at Alnmouth. In gardens, fields, hedge-rows, and woods.

12. *H. nemoralis*, var. *hortensis*.

Found with us only in the immediate neighbourhood of the sea. Very abundant at Alnmouth. This species is very fond of the stem and leaves of *Senecio Jacobæa* (the common Ragwort), from a single plant of which, I have collected more than twenty specimens. It varies much in colour and external markings. A pretty variety has two narrow brown bands on the under surface, between which is a row of brown spots, each connected by a thin brown line. In the aperture of this shell and at a distance of 2 lines from its external margin, a narrow but well-marked ridge appears; the colour of this varies, and usually corresponds to that of the mouth.

13. *H. caperata*. Mont.

In limestone quarries and on the links by the sea coast. Ratcheugh, Alnmouth, Denwick, &c. This species, like the

last, presents within its aperture a well-marked ridge of a white colour.

14. *H. ericetorum*, Müll.

In the neighbourhood of limestone. Plentiful at Denwick, Alnwick Moor, Newton, Ratcheugh.

15. *H. hispida*, Linn.

Common under stones in woods and pastures, and about old walls and hedge-rows. Ratcheugh, Hulne woods.

H. hispida, var. *concinna*, at Ratcheugh.

16. *H. sericea*, Drap.

Rare. Hulne and Calish woods, where it feeds principally upon *Equisetum Telmateia* in damp places.

17. *H. aculeata*, Müll.

Rare. Occurs sparingly at Ratcheugh and Calish woods on decaying leaves. This minute and remarkable species is detected with difficulty, as its colour exactly resembles that of the leaves upon which it is found.

18. *H. lamellata*, Jeff.

In September 1857, I detected this rare and characteristic northern shell in the Calish woods, and subsequently in Rugley wood, in both situations on decaying leaves about rocks near running water. In certain lights it exhibits a satiny appearance, the result of the action of the rays of light on the fine and sharply cut striae which cover its surface.

19. *H. fulva*, Müll.

Beneath stones in quarries and old walls, and among moss and herbage in woods, hedge-rows, and pastures; not unfrequent, though seldom met with in abundance in any one locality. Ratcheugh, Denwick, Hulne woods.

20. *H. fusca*, Mont.

Rare. On *Equisetum Telmateia*, in damp places in Hulne and Calish woods, associated with *H. sericea*.

21. *H. pulchella*, Müll.

Rather rare. On the limestone at Alnwick moor, Ratcheugh, Calish woods, and Dunstanburgh.

H. pulchella, var. *costata*. On the old walls at Hulne Abbey.

22. *H. rotundata*, Müll.

Common under stones in woods, hedge-rows, and about old walls. Ratcheugh, Hulne woods, &c.

23. *H. pygmaea*, Drap.

Rare. Among moss in a damp situation, on Shortridge links, near Alnmouth.

GEN. BULIMUS, Scop.

24. *B. obscurus*, Müll.

Not uncommon. Under stones, especially on a limestone soil and about old walls. Ratcheugh, Hulne Abbey, Embleton, Newton. Seldom met with in abundance in one place.

GEN. PUPA, Lamark.

25. *P. umbilicata*, Drap.

Common under stones, among moss, herbage, and about rocks and old walls. Ratcheugh, &c.

26. *P. muscorum*, Linn.

Among grass and the roots of *Psamma arenaria*, the common bent of our links, near the sea. Not uncommon at Alnmouth and Dunstanburgh.

27. *P. edentula*, Drap.

Rare. On dead leaves at Ratcheugh and Rugley wood.

28. *P. pygmæa*, Drap.

Rather rare. On limestone rocks and stones at Ratcheugh, Alnwick moor, and Dunstanburgh.

GEN. CLAUSILIA, Drap.

29. *C. laminata*, Mont.

Very rare. This elegant southern species reaches the limit of its distribution to the north in Hulne woods, where it is found very sparingly. In Hampshire this shell is frequent in the hedge-rows and woods, where it is often associated with *Helix lapicida*, *H. cantiana* and *Cyclostoma elegans*, forms almost peculiar to the southern portion of our island, and none of which extends so far north as Alnwick.

30. *C. nigricans*, Mat. and Rack.

Not common. About old walls, rocks, and under stones. Calish woods, Hulne Abbey, and very abundant on the limestone rocks near Dunstanburgh Castle.

C. nigricans, Vardubia.

Rare. About an old wall in Rugley wood.

GEN. ZUA, Leach.

31. *Z. lubrica*, Müll.

Common under stones, about old walls, and among leaves and moss. Ratcheugh, Hulne Abbey, &c.

GEN. SUCCINEA, Drap.

32. *S. putris*, Linn.

On herbage in wet situations, common. This species attains considerable size on *Equisetum Talmateia*, a plant which ap-

pears to be peculiarly favourable to the development of land shells, probably from the amount of inorganic salts it contains. Besides the present mollusc, the following also live upon it: *Helix fusca*, *H. sericea*, *H. rotundata*, *Zonites alliarius* and *nitidulus*, *Zua lubrica* and *Pupa umbilicata*.

S. putris, var. *gracilis*.

In wet situations on a poor soil in exposed situations. Alnwick moor, Dunstanburgh, and Alnmouth.

FAM. LIMNÆADÆ.

GEN. PHYSA, Drap.

33. *P. fontinalis*, Linn.

On aquatic plants in ponds and rivers, Howick pond, river Aln. I kept several specimens of this shell in an aquarium for some months. They can raise themselves in water and sink at pleasure, as I have often observed, without having recourse to plants or other aids to assist their progress. They have, moreover, the power of walking along immediately beneath the surface of the water. Their usual mode of progression is by a series of jerks. In ascending or descending through water, the movement is a gradual and uninterrupted one.

GEN. PLANORBIS, Müll.

34. *P. albus*, Müll.

Howick pond on aquatic plants.

35. *P. glaber*, Jeff.

Fosse at Dunstanburgh Castle, on aquatic plants.

36. *P. spinorbis*, Linn.

Fosse at Dunstanburgh castle and in the Kimmere lough, on aquatic plants.

GEN. LYMNÆUS, Drap.

37. *L. pereger*, Müll.

Common in ponds, ditches, and bogs. Alnwick moor, Hulne woods, &c.

L. pereger, var. *ovatus*.

In a small pond near Dunstanburgh Castle.

38. *L. truncatulus*, Müll.

Frequent in ditches and bogs. Alnwick moor, &c.

GEN. ANCYLUS, Geoff.

39. *A. fluviatilis*, Müll.

Common on stones in running water. River Aln, Rugley burn, &c.

40. *A. lacustris*, Müll.

Rare. In the Kimmere lough upon the leaves of *Nuphar latea*.

FAM. AURICULIDÆ.

GEN. CONOVULUS, Lamarck.

41. *C. denticulatus*, Mont.

Rare. A single recent specimen found below the Churchill at Alnmouth, near high water mark.

GEN. CARYCHIUM, Müll.

42. *C. minimum*, Müll.

This very minute species is common among moss, herbage, and decaying leaves. Ratcheugh, &c.

CLASS II.—ACEPHALA.

ORD.—LAMELLIBRANCHIATA.

FAM.—CYCLADIDÆ.

GENUS—CYCLAS, Brugiere.

43. *C. cornea*, Linn.

Common in rivers, ponds, and ditches. River Aln, Alnwick moor.

GEN. PISIDIUM, Pfeiffer.

44. *P. obtusale*, Pfeiff.

Frequent in ditches. Alnwick moor.

45. *P. pusillum*, Turt.

In ponds and ditches. Dunstanburgh, Alnmouth.

46. *P. pulchellum*, Jenyns.

Ponds and ditches. Dunstanburgh, Kimmere lough.

FAM. UNIONIDÆ.

GEN. ANODONTA, Brugiere.

47. *A. cygnea*, Linn.

Common in running water and occasionally in ponds. River Aln, Howick pond.

Dead shells of the following species are occasionally met with at Alnmouth, where they have been introduced with ballast:—*Paludina vivipara*, *Bithinia tentaculata*, *Neritina fluviatilis* and *Unio pictorum*.

PROCEEDINGS
OF THE
BERWICKSHIRE NATURALISTS' CLUB.

The Annual Address, delivered at Wooler, on the 29th September, 1859.

By JOHN CHARLES LANGLANDS, Esq., President of the Club.

GENTLEMEN,

THE return of another anniversary affords me the opportunity of expressing my sincere acknowledgments, for the unexpected honour, which you conferred upon me last year, by electing me your President. A feeling of my own incompetency to occupy such a position would have led me to decline so high an honour, had not a rule of the Club forbade my doing so.

I have endeavoured to fulfil *one* of the *duties* of the office in attending all the meetings during this summer; meetings which have been favoured by bright and beautiful weather, and marked by pleasant intercourse. I shall now attempt to discharge *another duty* of your President, and offer a cursory review of the proceedings of the past season. The courtesy and forbearance which I have already experienced at your hands, encourage me to hope, that my shortcomings on this occasion will not be subjected to a very unfriendly criticism.

The anniversary meeting of 1858 was held at Norham, on the 22nd of September. I could not attend that meeting, and am indebted to Mr. Tate for the following notes of the proceedings.

"There were present, the President, (the Rev. W. Darnell), P. J. Selby, Rev. J. D. Clark, John Church, John Church, jun., George Tate, D. Milne Home, Wm. Boyd, Dr. Robson, Rev. R. Kirwood,

Wm. Dickson, P. Dickson, P. Clay, T. S. Grete, and J. Melrose. After dinner the President read his address, and proposed that J. C. Langlands, Esq., of Old Bewick, be the President for the ensuing year. The Rev. R. W. Kirwood and Mr. Walker were elected members. There were afterwards read the following papers:—Obituary Notice of the late Rev. Joseph Watkins Barnes, Vicar of Kendal, and *Miscellanea Zoologica*, by Robert Embleton, Esq.; Notes on the Geology and Archæology of Beadnell, by George Tate, F.G.S.; an Account of the Spurs found near Belford Castle, by the Rev. J. D. Clark; a Catalogue of Land and Fresh-water Shells in the neighbourhood of Alnwick, by Geo. R. Tate, M.D., Royal Artillery. Mr. Grete exhibited coins, cannon balls, and other Antiquities obtained near to Norham Castle, of which he agreed to furnish an account for our Transactions. Mr. Selby shewed two rare butterflies, *Vanessa Antiopa* and *Colias Edusa*, of which he also will give a notice.

“Mr John Wheldon, of London, was nominated a member of the Club.

“Norham, the place of meeting, though now but a poor village, was formerly a place of no little importance. It had its charter, granted by Bishop Pudsey in the 12th century, its Burgesses enjoying ‘all the liberties and free customs, which were enjoyed by the Burgesses of Newcastle and North of the Tyne,’ and its Bailiffs and Corporate Officers. It had also its weekly market, ‘kept,’ says a survey made in Queen Elizabeth’s time, ‘on the Sundaye, which by reason it is undecent is therefore the less used or esteemed.’ During the Saxon period this town was called Ubbanford, from Ubba or Offa a personal name, and a ford which here crosses the river. Its recent name Northam or Norham (that is North Town) occurs in A.D. 1082, and indicates its northern position. It gives the name Norhamshire to a considerable district, which was one of the earliest possessions of the see of Lindisfarne, and which subsequently formed part of the County Palatine of Durham. Over it, for many centuries, the Bishops of Durham exercised the powers of great Feudal Lords; but these powers were taken away by an act of Parliament in the reign of Queen Elizabeth. The church, the castle, and the historical events associated with them, still, however, give a great interest to this locality.

“After breakfast the Club visited the church, which since the repairs and restorations effected during the incumbency of the late

Dr. Gilly, is a large and impressive edifice. Notwithstanding the ravages of time and of war, there are still considerable remains of the original structure, which was erected about the middle of the 12th century. The style is late Norman, similar in character to the Galilee of Durham. Some of the old arches and piers of the nave, and the chancel arch, are in good condition; and there are three original windows which are distinguished by the bold and beautiful chevron ornament which adorns the circular arches. Further notice however is unnecessary, as an admirable description has been given of this church by Dr. Gilly in our Transactions; and, as he was long a member of our Club, and President of it in the year 1851, the party could not view, without feelings of deep interest, the monument which has recently been erected in the chancel to his memory. A full-length figure of the Reverend Doctor, carved in Caen stone, reposes on a raised tomb, over which is a Norman arch. The sculpture expresses well the intellectual and benevolent features of this distinguished man. Within the niche is placed the following inscription:—

‘ TO THE MEMORY OF
THE REV. WILLIAM STEPHEN GILLY, D.D.,
VICAR OF NORHAM, CANON OF DURHAM,
AND FRIEND OF THE VAUDOIS.
WHOEVER SHALL LOOK UPON THIS MONUMENT,
LET HIM REMEMBER
THAT BY WORKS OF FAITH AND LABOURS OF LOVE
A NAME MAY BE IMPERISHABLE.’

“A little eastward of the present church stood the older Saxon church, which was erected by Eggrid, Bishop of Lindisfarne, in the 9th century. Several sculptured stones—fragments of this old church, have, at different times, been dug out of the foundations. One of these, with an inscription in Saxon letters, is noticed by Wallis in his History of Northumberland, in 1769, and he gives a copy of the inscription. Hutchinson subsequently gave a drawing of the whole stone, which, besides the inscription, has six heads sculptured on it. This stone has for some time been lost. Wallis’ explanation of the sculpture is very fanciful; and Dr. Raine in attempting a reading of the inscription is equally imaginative. Eighteen other fragments, discovered chiefly in 1833, are now preserved in the churchyard, built up into a pillar in imitation of the shaft of an ancient cross. One of these stones, which has been sepulchral, has an inscription in Saxon letters, which appears to be

P. ANIMA ÆLFA, probably when complete meaning "Pray for the soul of Ælfa." Another stone has a figure of a monk giving the benediction; some present strange combinations of circles; one has a large and elaborate wheel-shaped ornament; and others furnish beautiful examples of knot, scroll, and diaper work. The whole of these sculptures should be figured in our Transactions, as they are an instructive group, illustrating the Saxon styles of ornament in the ninth century.

"Leaving the church, the party strolled along the north bank of the Tweed towards Milne Graden, and under the guidance of Mr. D. Milne Home, noticed the geological features of the district. The strata here consist of red and other sandstones, marly limestones, and shales. In the sandstones are carboniferous plants, and in the shales, species of *Modiola* and *Entomostraca*. These beds belong to the lowermost division of the mountain limestone, which I have in a former note designated as the Tuedian group; and they lie below the workable seams of coal. The rocky strata are overlaid by a large deposit of rolled blocks and water-worn gravel, indicating that at no very distant era, the valley was filled with water to a height considerably above the present level of the river.

"At Milne Graden the party were hospitably entertained; and some time was spent there in examining a map of North Durham, on which Mr. D. Milne Home had laid down the range of the various coal seams and limestone strata. Before leaving Milne Graden the rain began to fall heavily, and as the day was unfavourable for natural history observations, the party crossed the Tweed in a boat, and returned by railway to Norham.

"'Norham's castled steep' was next visited; and the different parts of this interesting ruin were ably explained by the Rev. J. D. Clark. Though but a ruin, the castle is still a noble object, standing on the elevated and steep southern bank of the Tweed; and enough still remains to attest its former strength and magnificence. It was built by the warlike Bishop Flambard in A.D. 1121, and since that period it has been the scene of many of the leading events in Border History. Fifteen years after its erection, it was taken by David I. King of the Scots; but soon afterwards restored to the English. In A.D. 1138, it was again taken by the same king, who is said to have razed it to the ground; but the destruction had not been so complete, for a considerable portion of Flambard's work remains on the east side and south-east corner of the Keep. Bishop Pudsey repaired the broken fortifications,

and built a strong tower. He made additions to the western part of the Keep, and raised the height of the tower; this masonry is readily distinguishable from that of his predecessor. To obtain the means of accomplishing this great work, appeal was made to the superstitious feelings of the period; for a fragment of the winding sheet of St. Cuthbert, the popular Northumbrian saint, was exhibited to those who contributed money to carry on the building. Early in the 13th century, conferences were held in the castle between King John of England, and William the Lion of Scotland, to establish peace between the two nations; but kingly treaties were of little avail, for in A.D. 1215, Alexander, King of Scotland, besieged the castle for forty days, but without success. Norham in A.D. 1291 witnessed the submission of the candidates for the Scottish throne to Edward I. of England, who here sat in judgment on their rival pretensions. The gallant defence of Sir Thomas Grey, the governor, and the timely aid of Lords Percy and Neville, saved the castle from the Scots in A.D. 1318; such, however, was the changing fortune of Border warfare, that it fell into the hands of the Scots in A.D. 1322, but was soon retaken by Edward II., after an assault of ten days. In the course of this century it was repeatedly besieged, taken, and recovered. It was extensively repaired and strengthened in the early part of the 15th century; but towards the close of that century it had again fallen into a ruinous condition; it was however put into a good state of repair and well garrisoned by Bishop Fox, and in A.D. 1498, it withstood successfully a siege by the Scots led by their gallant King James IV; the Bishop himself hastened to succour the castle, and after a heroic defence of sixteen days, it was ultimately relieved by the Earl of Surrey. It was however taken by James in A.D. 1513 after a siege of six days; but the disastrous battle of Flodden Field, fought soon after, when so many flowers of Scotland's 'forest were a' wede away' caused it to be restored to the English. From this period the castle loses historical interest. The accession of James I. to the English throne brought peace to the Borders, and strong castles and Peel towers, adapted for defence and not for comfort, lost their importance, and were for the most part abandoned, and suffered to fall into decay. Neglect, the silent aggressions of time, and the more serious dilapidations occasioned by the inhabitants of the district using the castle as a quarry, to supply stones ready prepared to build houses, boundary walls, and even common dykes and drains, have

combined to render the once proud Norham Castle an uninhabitable ruin, but still a ruin majestic and impressive."

The first meeting of the year, under my Presidency, was held at Berwick, on Wednesday the 27th of October. Present,—The Rev. Wm. Darnell, Rev. J. Dixon Clark, R. Embleton, Secretary, George Tate, J. Church, Wm. Dickson, Robert Home, Major Elliott, Wm. Boyd, James Grey, F. R. Wilson, and J. C. Langlands, the President for the year. The accounts were examined, and the subscription fixed at 6s. 6d. Mr. G. Tate was appointed joint secretary with Mr. Embleton. The meetings for the year were fixed as follows:—Coldingham, May 26; Rothbury, June 30; Melrose, July 28; Wooler, September 29; and Berwick, Oct. 27.

The financial business being finished, the majority of the party drove to Burnmouth, from whence they walked along the beach beyond the village of Ross: passing the point at which the carboniferous series of rocks abuts upon the Silurian beds; the sandstones becoming visible in masses, on approaching Marshall Meadows. Passing through Ross, we observed a curious notice affixed on the door of one of the herring curing houses, to this effect:—

"BORDER MARRIAGES.

ANDREW LYON

Begs respectfully to intimate, that he can be found, at his residence, Coxon's Lane, adjoining Walken Gate Lane, any time his services may be required, by parties visiting the Hymeneal Shrine on the Scottish Borders."

It is to be regretted that this practice still continues among residents in Scotland. The new church of St. Mary's, recently built by Capt. Gordon, M.P., of Fyvie Castle, was visited on our return.

The party assembled at dinner at the Red Lion, and had the pleasure of welcoming as their visitor, John Stuart, Esq., of Edinburgh, the secretary of the Spalding Club; with whose valuable and beautiful work on the "Sculptured Stones and Crosses of Scotland" the Club has been made acquainted by Mr. Tate. We had the satisfaction of electing Mr. Stuart one of our members.

The Club met at Coldingham, on Thursday, the 26th of May. After breakfast the remains of the Priory were examined under the able guidance of Mr. Dickson, whose connection with the parish of Coldingham, as owner of the estate of Whitecross, on which formerly stood one of the crosses which marked the boundary of the sanctuary, in addition to his taste and information in

antiquarian pursuits, give him great interest in this once extensive ecclesiastical foundation. The paper by Dr. Hood on Coldingham Priory, which was read in 1856, must be familiar to most of you. I shall, therefore, content myself by condensing a few remarks upon the Priory from the pen of one, who, alas! can no longer instruct or amuse us, by his varied stores of information—the late Rev. Dr. Raine.

The Priory was founded in 1098 by king Edgar, and dedicated to S.S. Cuthbert, Mary, and Ebba. Its large possessions gave the name of Coldinghamshire to a considerable part of Berwickshire. Its records commence at an earlier period than those of any other monastery in Scotland of which the charters have been preserved, and supply much new and valuable information with respect to that kingdom. From the locality of the Priory of Coldingham, and its connection with England, its history is of more importance than that of any other Border monastery. Although locally situated within the territory of Scotland, it was subordinate to an English Church—that of Durham; which exercised over it an absolute control, and appropriated to its own use a considerable portion of its revenues. The church of Coldingham was therefore not unnaturally a source of jealousy to Scotland in times of peace, and an object of open attack in time of war. Often did the monks find it necessary to conciliate the protection of their powerful neighbours, the Earls of Dunbar, the Douglasses, and the Homes, by beneficial leases, or places of emolument; and in time of war, were not unfrequently driven from their Priory to await at Holy Island, or Durham, the truce which might send them home to empty garners and a desecrated church.

In 1485 an Act of the Scottish Parliament annexed the Priory of Coldingham to the Royal Chapel of Stirling. In 1544, the Priory was partially burnt and destroyed, in the reign of Henry VIII., on the retreat of the Earl of Hertford, afterwards Duke of Somerset. Its demolition was completed by Cromwell on his invasion of Scotland in 1648. The inhabitants of the district, who were for the most part Churchmen and Royalists, offered some opposition to the Protector, and defended themselves in a massive square tower, which stood at the north-west corner of the Priory. The tower was shattered by his artillery, and the south wall of the church at the same time was blown down with gunpowder. Of the present remains of the Priory of Coldingham, a few words may be said: they are but a small part of the former edifice. The

domestic buildings have nearly all disappeared, but the rude inequalities of the ground prove them to have been of considerable extent, as might naturally have been expected in the case of an establishment so opulent in its endowment, and so marked by the favour of the earlier Scottish kings. Of the church itself, Dr. Raine remarks in his preface to the Surtees papers of 1841: the north aisle only remains, which is used as the parish church. The architectural features of this portion of the original church are of a very interesting character. The base is externally Norman, of a somewhat late date. The upper portions of the walls, and internally the whole fabric, are of the Early English period; and the ornamental parts of these portions will bear a rigid comparison with the most highly finished buildings of that most striking style.

Recent excavations have proved that the north and east walls are those of the choir of king Edgar's magnificent structure, built over the ruins of the chancel of a former nunnery, the apsidal termination of which was laid bare in clearing out the rubbish. The Heritors of the parish, assisted by Her Majesty's Commissioners of Woods and Forests, to whom the fabric belongs, have, highly to their honour, lately completed a preservation of this part of the structure, which is used as the Parish Church. The inside has been stripped of the unsightly galleries and pews, which, with the whitewash, concealed the finest part of the work, and by which the beautiful masonry had been mutilated and effaced. On the outside, the earth has been excavated and removed from the base of the building, and the incongruous erections, which clustered against the north wall, have been removed. The solid mass of masonry which was built up in 1662, to restore the part destroyed during the Great Rebellion, has been pierced by lancet windows, and the west gable has been rebuilt in uniformity with the east and north walls. The propriety of thus closing up the choir in the place where the arch once stood, as well as the adoption of a flat roof, may perhaps be questioned; but so much has been done to improve that it is perhaps unfair to criticise. The architect employed was Mr. W. J. Gray, a native of Coldingham. The workmanship of the whole has been very well executed, and the general effect of the beautiful Early English arcade inside is very striking. With the exception of a short period after the demolition of the church by Cromwell, it seems to have been always used as a place of worship.

The first Presbyterian Minister after the Revolution was Mr. John Dysart; he was forced on the unwilling parishioners, who were chiefly staunch Episcopalians, by the military in 1694, their own clergyman continuing to officiate in a barn.

Leaving the Priory, the party proceeded to St. Abb's Head and Coldingham Loch, under the guidance of Mr. Heriot of Northfield, who kindly accompanied them. The beauty and colouring of this bold and picturesque coast, enhanced as it was by brilliant sunshine and a clear smooth sea, afforded such a series of pictures as are not to be rivalled. The extraordinary contortions of the Silurian strata which form part of these precipitous heights have long attracted the attention, and supplied materials for speculation to some of our most eminent geologists. They extend from Siccar Point to Burnmouth, on each side of the igneous rocks which are intruded about St. Abb's Head. For the following valuable notes on this interesting sea wall, I am indebted to Mr. Tate, who had set out from Coldingham at an early hour:—

“Tempted by the fineness of the morning, I started very early, under the guidance of Mr. Wilson of Coldingham, to ramble over the neighbourhood, and more especially to examine the rocks and antiquities of St. Abb's Head. Coldingham stands on porphyry, (a fire-formed rock), which ranges from the Eye water to the north side of Coldingham sands. This rock is seen in the Eye, and it forms cliffs in the narrow glen in which Cole Burn flows. The bold headland of St. Abb's is also porphyry, which extends from Coldingham sands northward about two miles to Petticowick Cove, forming a promontory jutting into the sea; and more effectually resisting the wasting action of the German ocean, than the softer greywacke rocks, which it has pierced through and uplifted. The porphyry is usually of a reddish colour, having a claystone base, through which are scattered a few crystals of felspar; at the north end it is amygdaloidal, and not unfrequently contains green earth; in the more southern parts amygdaloidal tufa occurs. This promontory consists of four hills separated from each other by what are here called “nicks” or high valleys. The same term is used to designate similar valleys in the basaltic range in south Northumberland, which is crested with the Roman wall; there we have the “Nine Nicks of Thirlwall.” The most southerly and lowest of St. Abb's hills is the Castle Hill, named so from the resemblance presented by the rocks to a ruined castle; the Kirk Hill follows, next is Harelaw, and the largest and boldest is the Headland. Some parts of the rock are softer than others, especially

where there is tufa; and these portions have been hollowed out and caverned and worn into deep chasms; here, even in moderate weather, there is a heavy roll of the tide, and a hoarse gurgle is heard resounding among the caverns. The scenery is wonderfully varied, picturesque, and impressive. In front of the lofty cliffs are many detached masses of rocks. Some are single, surrounded by the sea, others are in groups; all, however, are fashioned by the elements, into peculiar, and not unfrequently grotesque forms; not a few resemble ruined buildings and towers. One rock in Petticowick Bay had for its old name "The Auld Wife;" its more modern name is "Lord Brougham," from an odd likeness to that distinguished orator; there are his wig—his marvellous nose—his projecting and heavy under lip, and a vivid imagination can even see the Judge's robe.

"The stratified rocks in this district are greywacke and greywacke slate, being part of that formation, which extends across Berwickshire in a west-south-west direction, and which has been ranked as lower Silurian by Murchison and Cambrian by Sedgwick. These rocks are seen at the mouth of the Cole Burn and at Coldingham sands, on the south side of the porphyry; they appear again at the north side in Petticowick Cove, where they form a series of remarkable foldings and curvatures, in one part dipping north-north-west 50 degrees and at a short distance making a complete bend, and dipping 50 degrees to the south-east. Westward of St. Abb's Head, greywacke forms the Raven's Brae; a deep swampy valley here separates the stratified from the igneous rocks. Most probably this had been scooped out when the district was under water, for beneath the soil is a considerable accumulation of rounded water-worn stones. A natural cause was, however, not sufficient for the old chroniclers; one relates that, in the seventh century, the sea flowed miraculously into this valley, and that for seven days St. Abb's Head was converted into an island, in order that the Virgin Queen Edelthyra and her two Holy Virgins Sewenna and Sewara might be protected from her husband King Egfrid. He had given her permission to become a Nun in the sanctuary of Ebba, but changing his mind, he followed her to bring her back by force; but the miraculous flow of the water evidenced to him, that the Deity was unfavourable to his purpose, and he therefore abandoned the attempt and returned to York.

"In the course of our ramble we saw a singular mass of artificially fused rock, called "The Deil's Danders," standing on the south side of the Cole Burn where it joins the sea; it is six feet

high, and as many in diameter at the base. It is said to have formerly been considerably higher; and it was then useful as a "Mead" or landmark for seamen. This mass is a kind of scoria with fragments of greywacke interspersed. Its origin is doubtful; one account states, that about sixty years ago, in accordance with the advice of Sir James Hall, an attempt was made to procure lime by burning the greywacke, and that the "Danders" was the result. The popular name however indicates a more remote origin; and it is scarcely probable that so good a geologist and chemist as Sir James Hall would recommend such an attempt, since greywacke contains little or no lime. More probable is the opinion, that the "Danders" is a monument of an abortive experiment made by the mediæval Monks of Coldingham to obtain lime from rocks in their own district, to save the expense of bringing it from the neighbourhood of Berwick.

"Ecclesiastical remains are on two of the hills constituting Abb's point—on the Kirk Hill and on the Headland. A monastery was erected at an early period in Saxon times on Abb's Head, probably indeed sometime previously to the middle of the seventh century.* Certain it is, however, that about this period Ebba was the head of a religious establishment here, when, according to Bede, it was visited by the renowned Northumbrian Saint Cuthbert. Not long after Ebba's death it was burnt through carelessness in A.D. 679. Another convent was subsequently built, but whether on the Headland or on the site of the Priory of Coldingham is doubtful. This was also, in A.D. 870, destroyed by the Danish chieftains Inguar and Hubba. Of the early Saxon buildings on the Headland no vestiges remain; and the ruins now seen on the two hills are, I think, referable to the early part of the twelfth century; for in Carr's History of Coldingham, written in 1836, it is stated, that "the walls of St. Abb's Kirk and a small Saxon arch were seen within these few years." Doubtless the arch referred to was of the Norman period; it was the fashion at the period when Mr. Carr wrote, to call "Saxon," the circular arches which are now well known to be the work of the latter portion of the eleventh and early portion of the twelfth centuries.

*When St. Ebba drifted on shore at Coldburg Head, about 640 A.D., she found a religious establishment already existing. It was probably founded by St. Cuthbert about 570 A.D.

Churches stood on both hills; the plan, which is distinctly traceable and is peculiar, is the same in both. Little more than the foundations remain of that on the Kirk Hill; internally it is 72 feet long, and 22 feet broad, with walls 4 feet in thickness, built partly of porphyry and partly of sandstone. The boundary of a small cemetery is also visible; and formerly there were several monumental stones. A farmer, however, it is said, coveted this "God's Acre," tore up the tombstones, tumbled these memorials of the dead over the cliff into the sea, and ploughed up the green 'heaving turf.'

"The ruins on the Headland most probably mark the site of Ebba's monastery. The situation is singularly wild and picturesque. Here the porphyry presents to the sea a stupendous wall, about 300 feet in height; protruding from this wall into the sea, is a mass having a lower level; it is indeed a little peninsula of about two acres, united to the mainland by a narrow neck, which has been cut into, so as to form a ditch, the inner edge of which was defended by a strong wall and probably also by a draw bridge. This portion of the Headland is hence named the "ramparts." The church stood near to the edge of the northern cliff, indeed only two yards from it. The remains shew somewhat more than the foundations; the wall on some parts is three feet high, built entirely of porphyry. The size is about the same as that on Kirk Hill, being 72 feet long by 21 feet broad. A door is in the south-west corner, and there appears to have been a flight of steps from the exterior into the church of about three feet in height; another door opened from the north about eleven feet from the west end. The peculiarity of both churches is however in the chancel, which was a small recess of a square form at the south-east corner, being about twelve feet in breadth, or about half the width of the church, and eight and a half feet long. This, I believe, is an unusual arrangement. To the west of the church are obscure remains of other buildings which had probably been the inhabited portion of the monastery. Few if any records throw light on the history of these edifices. They had, I think, been subordinate to the magnificent establishment which flourished at Coldingham; and they may have been placed on commanding positions on the sea shore to attract the attention of mariners and induce them to make their offerings before the shrine of the Sainted Ebba.

"Though confined, lonely, and inhospitable, the situation of the monastery was tolerably secure, and the scenery romantic and picturesque. Viewed on a fine day, such as we enjoyed, with a

clear blue sky above, and a bright sun illuminating rock and sea, there was even much beauty in the scene. Columns and broken masses of rock rise on the north side of the platform whereon the buildings stood ; but through the opening between them, we look down a deep chasm, bounded on the north by lofty cliffs, adorned by lichens and mosses, here and there relieved with patches of the bright sea pink, and of the sea campion with its white flowers and glaucous green leaves. Isolated pillars and masses of rock stand in the midst of the sea, and, resembling a group of buildings, they have been named the Barn Yard. According to Scott, Melrose should be visited by moonlight, and I am told that when these rocks are viewed by moonlight, the illusion is complete—the farm house with its chimney is seen, and beside it may be recognised the various buildings usually clustered around a farm house. Few spots would therefore be more fitted for recluses than this. Shut out from the world and placed amid impressive natural objects, they had around them abundant materials suggestive of thought and calculated to excite the feelings ; and if, in the calm and sunshine, there is much to minister to fancy and gratify taste, how powerfully would such a scene impress the mind, when the wild wind blew, and the ocean was lashed into a storm.”

Mr. Heriot conducted us to the summit of a precipitous sea cliff north-west of St. Abb's Head, called Earnsheugh, on which there is a curious three walled camp placed on the very edge of the precipice, three sides of which supplied it with a natural bulwark, elevated 430 feet above the sea. This camp has a striking resemblance to the large camp at Old Bewick in Northumberland. Many of the knolls also, between Earnsheugh and Coldingham Loch, are marked by trenches. The loch is a fine sheet of water, about thirty acres in extent ; and about 250 feet above the sea. The view from the summit of St. Abb's Head is very fine. To the south are the distant Cheviots, Bamburgh Castle, the Farne Islands, and the Holy Isle ; turning round, to the north, are Fast Castle, the Bass Rock, Tantallon Castle, and the Isle of May, with the Fife coast in the extreme distance. Several rare birds were noticed during the ramble, especially two pairs of Peregrine Falcons, and two pairs of Ravens. The buckbean (*Menyanthes trifoliata*), and the yellow water-lily (*Nuphar lutea*), were found near the loch ; and the rose-root (*Rhodiola rosea*), in great luxuriance on the cliffs about St. Abb's Head. Some of the party extended their walk to Fast Castle, the Wolf's Crag of the Bride of Lammermuir.

The party assembled at dinner, consisted of J. C. Langlands, President, Robert Embleton and G. Tate, Secretaries, Wm. Dickson, Rev. Dixon Clark, Rev. Wm. Darnell, W. Watson, C. Watson, F. R. Wilson, Dr. Robson, W. Boyd, J. Boyd, Scott Dudgeon, Geo. Hughes, jun., J. Macbeath, W. Logan, C. Rea, J. Clay, and Ralph Carr; with Mr. Heriot, Mr. Lomas, Mr. Pringle Hughes, and Mr. Edmund Carr as visitors. The following gentlemen were proposed for election at the next meeting:—Rev. J. A. Bennett, Ellingham, Mr. Pringle Hughes, Middleton Hall, Dr. Embleton, Newcastle, Mr. Middleton Dand, Hauxley, Mr. Stephen Sanderson, Berwick, Mr. James Maidment, 25, Royal Circus, Edinburgh.

The meeting at Rothbury was held on Thursday the 28th June. Present, the President, G. Tate, Secretary, Rev. Dixon Clark, Rev. F. Simpson, Rev. W. Dunn, J. Clay, F. R. Wilson, Ralph Carr, J. Stuart, Charles Rea, Jas. Grey, R. G. Huggup, Rev. G. S. Thomson, M. Dand; and as visitors, Rev. A. Procter, Rev. J. Hall, and F. Simpson, jun.

The drive over the rugged mountain road on a beautiful summer's morning gave a peculiar relish to the breakfast at the Three Half Moons, after which the members visited Rothbury church, and examined with much interest the fragment of the Saxon cross, which now serves as the shaft or pillar of the Font, and which was described by Mr. Dickson in the last year's transactions. A headless figure was formerly set in the wall on the right-hand side of the south porch of the church—the right hand bearing a sword, the left a large purse, representing St. James of Compostella—like the fragments of the Saxon cross, it also has disappeared since the restoration of the church. The Rev. J. Hall shewed the members some urns, and an iron weapon, which, with a number of bones had been found in cists at Tosson and Rothbury. A description of these will be given in a separate paper. The party then strolled down the banks of the Coquet to Brinkburn Priory—viewing on their way the romantic *Thrum* or Scottish ford, the Reiver's Well, one of those wonderful springs of water which occur in several places in this neighbourhood. They passed round the Crag End, on which is situated the quarry of pure white close-grained freestone, from whence the massive blocks are procured for the landings and staircases of Alnwick Castle. The extensive works of the new iron smelting company were passed; but no smelting appeared to be going on at present.

In a deep dark dell, at the bend of the river on the north bank of the Coquet, stands Brinkburn Priory, one of the finest relics of the transitional period in England. The site of the monastery must have been chosen, with a view to perfect seclusion. The opposite bank is rocky and precipitous, and covered with wood. The approach is partly cut through a rock, and affords no view of the building till we come within a few yards of the north door of the church.

The Priory chapel, with the exception of the roofs and the south-west angle of the nave, was in very perfect preservation; and some years ago, it was in contemplation to restore the roof, in order that Divine service might be celebrated there. Mainly through the energy of the late Archdeacon Sharp, Vicar of the adjoining parish of Hartburn, a fund was collected by public subscription for the purpose; but the then proprietor, Mr. Fenwick, claimed the building as his private property, and the attempt was not made. The fund has remained in the hands of the Archdeacons of Northumberland until it now amounts to upwards of £3000.

The roofs of the chapel, and the dilapidated parts of the stone work, have recently been restored at a very considerable cost; under the able direction of T. Austin, Esq., Architect, Newcastle. The good work which has been accomplished, is entirely *the result of private exertions*; and the restoration will proceed until the building is rendered, once more, a fitting temple for the worship of God. Some difficulty has occurred respecting the appropriation of the fund, but it is hoped that it may yet be overcome. As the object for which it was raised is attained, an attempt is about to be made to make it applicable to the payment of a clergyman, and to allow the Vicar of Felton to cede the chapelry of Framlington, which, united to Brinkburn, shall constitute a benefice.

The history of the Monastery of Brinkburn, Brenkburn, or Brincaburgh is very obscure. William Bertram, second Baron of Mitford, is generally believed to be the founder, in the reign of Henry I. Leland attributes the foundation to a member of the families of Felton or Lisle. An abstract of the Brinkburn chartulary is printed in the *Archæologia Æliana*. It is now the property of C. H. Cadogan, Esq., whose modern residence occupies part of the site of the monastic buildings. I am glad to have this opportunity of expressing our obligations to him, for his kindness in permitting us to view this interesting relic; as well as for his courtesy in affording information regarding the restoration

The right of sepulture within the chapel is still claimed, or permitted, to some properties in the vicinity. On the 24th May, 1828, Fenwick of Brinkheugh shot his son, the bullet used being the top of a brass extinguisher. He was tried and acquitted on the ground of insanity. The young man was interred in the family burial place belonging to Brinkheugh, in the south transept of the Priory church. Brinkheugh has since been purchased by Mr. Cadogan.

In clearing away the rubbish inside the church, a coped coffin lid was found; in the centre is a cross with trefoils, on the right side is a Bishop's mitre, on the left of the shaft of the cross is a pastoral staff. An inscription in well cut letters runs round, one word of which seems to have baffled all attempts to read it. It is the tombstone of Prior William, who was a suffragan under the Bishop of Durham, and who died in 1484. Dr. Raine conjectured that the word was the name of a Scottish or foreign see, of which he had formerly, "quondam," been Bishop. He never saw the tombstone himself, but investigated the matter, having a copy of the inscription supplied to him by the Rev. John Bigge. They found a regular list of the suffragans of Durham, *subsequent* to 1484; and in the rolls of the Bishop of Durham, there is an entry of certain sums paid as a salary to William Prior of Brinkburn, as suffragan to the Bishop of Durham.

Pellitory-of-the-wall (*Parietaria officinalis*) was observed in abundance about the ruin, as is usually the case near monastic buildings, forming as it used to do part of the materia medica of the monks.

The Rev. C. Vernon Harcourt on our return to Rothbury politely invited the members to visit Whitton Tower, one of the ancient Border Peel Towers; had time permitted, I am sure it would have afforded us much gratification to have availed ourselves of the Rector's kindness. It was with regret that we found his health prevented his joining our dinner party. After dinner Mr. F. R. Wilson showed some carefully executed drawings of Chibburn near Warkworth; a religious house of the fourteenth century, and explained the peculiarities of its structure. He then read an excellent paper on Brinkburn Priory, which was accompanied by a highly finished wood cut, presented by him to the Club, and which appears in this number of the transactions. The members proposed at the last meeting were elected, and the Rev. Aislabie Procter of Alwinton, and Dr. Lewis George Broadbent of Bamburgh were proposed.

The Club met at Melrose on Thursday the 28th July. Present, the President, the Rev. J. Dixon Clark, the Rev. W. Darnell, Robert Home, J. Macbeath, Wm. Boyd, S. Sanderson, Rev. J. Baird, Rev. Thomas Leishman, Major Elliott; and the Rev. W. Murray, Melrose, Mr. Curle, and C. J. Langlands as visitors. The members proposed at the last meeting were elected, and the Rev. J. D. Clark proposed Charles Bertie Pulleine Bosanquet, Esq., of Rock; and Mr. Macbeath proposed Wm. Melville Lomas, Esq. of Horbury Hall, Wakefield, for election.

The distant position of Melrose, and railway arrangements, made it late ere the members could assemble: after a hasty luncheon, they proceeded to the Abbey—the finest specimen of the Decorated style of which Scotland can boast. Amidst the ruins, close by “the marble stone” where “a Scottish Monarch slept below,” the interesting historical sketch of this famous foundation, drawn up for the meeting by John Stuart, Esq., F.A.S., Edinburgh, was read, to the manifest gratification of some fair tourists who were present, as well as of our members. The beauty of this ruin is well known; its most minute ornaments retain their sharpness, and seem as entire as when newly wrought, after having resisted the weather for so many ages. Leaving the Abbey, the party separated; some to visit Abbotsford—the realization of the great author’s dream of territorial acquisition; some, on a ramble to the pretty little valley, about two miles west of Melrose, “The Fairy,” or “nameless glen,” remarkable for the “*Fairy Stones*” which are found after falls of rain, washed out of the boulder*clay, through which the little brook cuts its downward course. These concretions contain about 30 per cent. of lime, and are probably segregations of the lime, originally diffused through the clay; the lime in the course of its separation from the mass has attracted to it certain quantities of the earthy matter. The cause why this occurs is obscure, but we know that certain minerals do separate from others; ironstone nodules from shale—flints from chalk—and chert out of the limestone on the Tweed, are examples of this fact. I state this on better authority than my own—that of Mr. Tate. This little glen is also interesting, as being the scene where many of the events of the great novelist’s romance of “The Monastery” are supposed to have taken place. Another party climbed the three picturesque Eildon Hills, to inspect the remains of the ancient camps, on the eastern hill; and to enjoy the glorious prospect which embraces such a wide extent of the borders. Sir Walter Scott used to say, that he could point out from this hill

nearly fifty places, noted as the scenes of Border exploits, or celebrated in Border song. The plants observed, were musk Mallow (*Malva moschata*), Wall Rue (*Asplenium Ruta-muraria*), yellow Stonecrop (*Sedum reflexum*), and in abundance on the top of the hills Bilberry (*Vaccinium Myrtillus*). Mr. William Boyd announced the intention of the Rev. James Turnbull to resign as member of the Club, he being on the point of emigrating to Africa. Mr. Turnbull wished it to be made known to the members who take an interest in Entomology, that he shall be glad to afford any assistance in his power, in that department of natural history. His address will be, "*Beaufort, Cape Colony*."

I have one mournful duty to discharge, in recording the death of two of our members since the last anniversary, the Rev. T. S. Goldie, of Coldstream, has been taken away at a mature age; and Dr. George Douglas, of Kelso, has been cut off in the prime of life, leaving a youthful widow to deplore his loss.

The progressive increase of members, augurs well for the future success of the Club. Since the last anniversary fourteen new members have been elected; all of whom, I hope, have joined it, determined to contribute something to the general stock of information—some of them, I am sure, are likely to be active promoters of its objects.*

The details which I have submitted to you, show that the attention of the Club has been more than usually directed, this summer, towards Archæology. This has arisen in some measure, from the circumstance that the natural history, botany, and geology of the district have been pretty well worked up; but chiefly, because the places chosen for our meetings have peculiarly favoured the pursuit of such studies. In this particular department a broad and rich field of labour is still before us. The border district, within the limits of the Club, is richly studded with numerous ancient dwellings, hill forts, and camps, many of which remain unnoticed in the more secluded parts of the district. Much has been done of late to elucidate the *Roman*

*NEW MEMBERS.—Rev. R. W. Kirwood; J. Walker, Greenlaw; J. Wheldon, London; J. Stuart, F.A.S., Edinburgh; Rev. J. W. Bennett, Ellingham; Pringle Hughes, Middleton Hall; Dr. Embleton, Newcastle; Middleton Dand, Hauxley; J. Sanderson, Berwick; James Maidment, Royal Circus, Edinburgh; Rev. Aislabie Procter, Alwinton; Dr. Lewis George Broadbent, Bamburgh; Charles Bertie Pulleine Bosanquet, Rock; and W. Melville Lomas, Horbury Hall, Wakefield.

portion of the history of Northumberland, by the accurate and beautiful surveys which have been executed at the cost of His Grace the Duke of Northumberland, by Mr. Maclauchlan. The Duke proposes, I believe, next to direct the attention of that accomplished surveyor and antiquary to laying down the still more ancient series of fortifications, which stretch across from the hills near which we are now assembled, to the coast.*

The tale of the curious sculptured stones, which have been found in close connection with so many of these camps, is yet untold. Mr. Tate has been engaged upon this investigation, and will, I hope, ere long, have something to disclose to us. We need not despair, after the progress which has been made in deciphering the Runic inscriptions, that a key to the meaning of these strange circles, may be discovered.

The past season has been very peculiar in its character. Succeeding a year of unusual dryness, the same absence of rain has marked its course; water has become scarce, and many weak springs have been dried up. From the 1st of January up to the 28th of September only 20 days of *rain*, and 34 days of *changeable* weather are noted, while we mark 214 days of *fair* weather. The winter was remarkably mild, the *lowest* temperature reached, being January 14th 27°, February 8th 29°, March 31st 25°, April 1st and 16th 26°. The summer which succeeded has been hot, the thermometer in the shade having reached, May 29th 78°, July 10th 76°, July 16th 86°, August 13th and 18th 76°. The average temperature at 8 a.m. has been January 40°, February 40°, March 43½°, April 42½°, May 50½°, June 56°, July 60½°, August 60¼°, and September 53°. The fall of rain at Lilburn Tower from January 1st to September 14th has only amounted to 14·031 inches.† Notwithstanding the high temperature there has been an absence of thunder storms in this district; but the Aurora Borealis has appeared unusually early—on the 28th August.

*ANCIENT FORTIFICATIONS.—Yeavinger, Akeld (Gleed's Clough, Harchope), Humbledon, Green Castle (Cup and Saucer), Maiden Castle (Kettles Camp), Weetwood, Doddington, Horton, Chatton, Chillingham, Ros Castle, Lyham, Belford Moor (Roman), Belford, Outchester (Roman), Spindleston.

BEACONS.—Yeavinger, Ros Castle, Warenton Law, Bamburgh, and Alnwick.

† FALL OF RAIN AT LILBURN TOWER.—January 0·875, February 1·740, March 2·055, April 2·295, May 0·345, June 1·820, July 2·156, August 1·245, September 1·500. Total 14·031 inches.

The harvest which is just concluded, has been one of the finest ever remembered; from its commencement, early in August, to the 9th of September there was only once or twice a slight shower of rain, and hot airy weather prevailed. The insect tribes, especially the destructive sorts, have not been so prevalent as is generally the case in hot summers. The Black Caterpillar or Collier, being the larvæ of the *Athalia centifolia*, which committed such ravages on the turnip crops in 1835, 1836, and 1837, as also in 1780 and 1783, made its appearance in the beginning of July, after an east wind which followed some extremely hot weather. Though very destructive during its stay, it did not remain long.

Our kindred society, the Tyneside Naturalists' Club, held a meeting on the 17th of August, on Cheviot. A joint meeting of the Clubs for personal and friendly intercourse was suggested, by their President, the Rev. H. B. Tristram; this was not practicable, but four of our members, Mr. Carr, Hedgeley; Mr. Tate; Mr. T. Tate, Hastings; and Mr. F. R. Wilson met the party at the remains of the ancient British town, near Linhope; and on the following day, I had the pleasure of accompanying them from Bolton to Hulne Park, and visiting with them "The Guards" (a reputed Roman camp), which is historically interesting as the meeting place of the Earl of Surrey, with Lord Daere and the forces from the west, on his advance to Flodden Field.

There is a subject which has lately called forth some remarks from my friend, the President of the Tyneside Club, which is important to all lovers of natural history, and to which I wish to draw your attention; it is the wanton destruction of rare birds and beasts, some of which have entirely disappeared; and also the eradication of plants, many of which, once common enough, are no longer to be found. Draining and agricultural improvement may to a great extent be the causes of the latter; but the Botanist is himself partly to blame, when he removes a rare plant from its habitat—forgetting that he deprives those who follow him of a gratification equal to his own. Such pilfering would long ago have eradicated the Lady's Slipper (*Cypripedium Calceolus*), in Castle Eden dene, but for the friendly watch which Mr. Burdon has found it necessary to keep over it; if similar care had been taken, the *Osmunda regalis* might still have existed among the rocks at Rowting Linn.

Two Hoopoes have been shot this summer, in Northumberland. This bird is almost domesticated in Holland, and would

become so with us, if unmolested. I lately found a very fine specimen of the Horned Owl, now becoming rare, which had been wantonly shot. The Peregrine Falcon, which used to breed on the moors close by my residence, has disappeared for many years. One of the pairs of Ravens which is still left in Northumberland, occasionally gratify us with their wild cry. But even these have been driven from their time honoured nest, by having their young ones shot in it. This destruction must not be charged against naturalists; it is mainly effected by the license which is permitted to gamekeepers, to destroy every thing which they may think proper to deem injurious to game. The enormous increase of Rats and Rabbits, also, is greatly owing to the destruction of their active little enemies, the Weazels, by persons of this class. Surely something might be done to check this growing evil.

Allow me, in conclusion, to express my thanks to the Secretaries, for the kind assistance which I have received from them; and to apologise to you, for having taxed your patience to such an unreasonable extent. May the Club flourish, and long continue to realise the intentions of our Founder. The motto which he selected, "MARE ET TELLUS, ET QUOD TEGIT OMNIA, CÆLUM," indicates a boundless range for investigation, in every part of which—to use the words of a charming modern writer—"The naturalist acknowledges the finger mark of God, and wonders, and worships."

Brinkburn Priory.

By F. R. WILSON, Associate of the Royal Institution of British Architects.

"I ransacked for a theme of song,
Much ancient chronicle and long."

In the green shade of a deep-set valley on the banks of the river Coquet, Osbertus Colutarius built Brinkburn Priory. The smoke from the hospitable fires of the Priory must have mingled its fleecy clouds with the boughs of outspreading trees; and the sound of the church bell must have reverberated thunderlike through their intertwined branches, for, on both sides of the river, high banks, crested with trees, rise steeply up to a great altitude and shut out the world from the Priory, much as a convent gate shuts out the world from its inmates. These banks are clothed with one rich

entanglement of foliage, through which juts of grey rock protrude themselves covered with mellow patches of amber lichens, and from which tall fir trees cast sombre shadows into the rippling stream below.

Situated in a spot so far removed from the highway, Brinkburn unfortunately escaped the notice of our earliest chorographers. This is to be regretted, as every notice of a building by a competent person is a link in its history. Camden, however, refers to the book of Brinkburn abbey for information on various subjects. This was the chartulary of Brinkburn Priory, an archæological treasure which is happily still in existence. An index compiled by Hodgson and published in the *Archæologia Æliana* is the only portion that is accessible now to the antiquary, for after a long repose in the Stowe collection, the Book of Brinkburn Abbey passed into private hands at the memorable sale. The topographer of the last century, painstaking Francis Grose, Esq., was more exact in his researches; and has made due mention, with due appreciation of the venerable pile. Hutchinson, Wallis, and Hodgson have all endorsed Grose's remarks. In our own day, Turner in his "*Beauties of England and Wales*," has immortalised the stage of decay at which it had arrived before the present restorations were undertaken; Cope, the royal academician has painted it; and the Rev. John Louis Petit, and the gifted Sidney Gibson, Esq., have lit up this building with their pens, each after his own inimitable manner. It would appear, after an enumeration of so many learned notices of the Priory, that there can be but little left to say upon the subject. But this is far from being the case. The history of Brinkburn Priory is not finished yet. Year after year facts of interest come to light which should be carefully recorded for the benefit of future generations of such societies as this, of which we have the honour of being members. In one year a fragment of the bell of the church, which had so often called men's thoughts from earth to heaven, and which Wallis says was removed to Durham Cathedral, was found buried at the root of a tree on the hill on the opposite side of the river. In another year a bronze mediæval vase was dug up about twenty yards south-west from the south-west angle of the nave, beneath a layer of charred earth and wood ashes, apparently the debris of a wooden building. It was nearly full of bright broad gold rose nobles of Edward the Third's reign, most of which have the Calais mint mark; a few dated from the short reign of Richard II.; and one from the reign of Henry IV. A roughly hewn stone trough was placed inverted over the precious treasure—amounting in all to nearly three hundred pieces. Old people in the neighbourhood talk about curiously carved chairs, which they can remember as having seen in cottages round about; from which remembrance we may form a hope, that we have not seen the last of the hidden treasure or dispersed furniture of the long departed Canons. And when we take into consideration the important restorations now in progress, we may fairly assume that there are many chapters in the history of Brinkburn yet untold.

In the reign of Henry I., William Bertram, Baron of Mitford, gave the site of these buildings to Osbertus Colutarius for the purpose of founding a priory of Black Canons. With the consent of his wife and son he endowed it richly with lands and woods. Subsequently his grandson made additional grants of land, with permission to cut timber out of his woods for the use of the Priory; besides allowing the Canons the privilege of killing game—a liberty there is no doubt they highly valued. This was the age when princes and nobles vied with each other in their zealous liberality to the church. It was a time also of unbounded superstition, when men's minds easily received the conviction, that the founding of a church to the glory of God must infallibly secure permanent and hereditary absolution for the founder and his heirs. Hence the profuse gifts, the ample endowments, and the liberties of taking fish and killing game so liberally granted to the religious communities of this period. Farther on in the march of time, it is recorded, that Prince Henry, afterwards King of Scotland, being created Earl of Northumberland by King Stephen, gave the property of a salt pan at Warkworth. He and his son William de Warren (so called from his mother's family) confirmed all previous privileges and possessions; the same being again confirmed more than once in those turbulent times by royal charter. Gifts flowed freely in from all quarters. The Canons sometimes made droll bargains to suit the wants of their Convent. Among others they granted two tofts at the east end of Newbiggen to Simon son of Mangur, jun., in consideration of the yearly rent of 500 herrings! Edibles must have been a most pressing necessity in an age when every traveller made a convent his inn; when passing regiments laid the community under contributions; and when foraging parties of Scots often stripped the priory of its stores. About this time, in the 8th year of the reign of Richard the Second, the Lady Johanna induced her son Ralph Lord Guystocke to give the impropriation and advowson of Long Horsley to the priory. The Canons of Brinkburn agreed, in return for this power vested in their hands, that the said Johanna and her heirs, Lords of Morpeth, should for ever have the power of nominating one Canon there; in virtue of which agreement we find Allen, son of John de Prestwick, soon afterwards nominated. Alas! for the heirs of the pious lady Johanna! The power vested in them forever was confined to very few generations. About a hundred and fifty years from this time Thomas Cromwell, whilome a hanger on at a Surrey blacksmith's forge, afterwards Secretary of State to Henry VIII. sent his fire-brand of a commission across the length and breadth of the country, which resulted in the dissolution of six hundred and forty-five monasteries, including this priory.

Many are the Brinkburn legends of foes and fays; and historical facts are scarcely less numerous. In the year 1414 the Prior of Brinkburn was deputed to attend a congress at "The City of Constance," when no less a subject was in agitation than the claims of three rival Popes to be the rightful occupiers of the

Papal chair. The Bishop of Durham was convened to attend this conclave, but being too much occupied with French negotiations at the time to be able to leave, he deputed the Prior of Brinkburn to go in his stead. Accordingly in one of the account rolls of the monks of Lindisfarne, we find an item of 6s. 8d. as a contribution towards the Prior of Brinkburn's travelling expenses to "the city of Constance."

Almost the last incident in the history of Brinkburn Priory, is recorded by the herald John Younge, in his account of the "Fyancesles of Margaret daughter of Henry 7th to James King of Scotland." He relates that when the splendid cavalcade of the Princess left Newcastle for Alnwick Castle "Half a mylle out of the said towne was Sir Humphrey Lysle and the Prior of Bringburn, well appoynted and well horst to the number of xx horsys. Their folks arrayed of their liveray." In all probability the Prior carried his most costly crucifix for the princess to kiss, as the herald records the observance of this ceremony in all similar cases on the long road from London to Edinburgh. A very short time after this, we find Sir Humphrey Lisle turning round upon his friend the Prior of Brinkburn, no longer travelling in his company to pay respect to a maiden princess, but carrying off his cattle, stealing his goods, taking his servants and tenants prisoners and setting them in the stocks, as may be seen from the following extract from a letter written by Thomas Dacres, and published in Hodgson's *History of Northumberland* :—

"To my lordes of the king our soveraigne lordes most honorable counsaill.

"My singular good lordes in most humble and lowly wise I recommend me to you—in so much as I am one of the justices of the kings peas within the county of Northumberland, and also have authority by commission for reforming of attemptates within the same, the copie whereof I send your lordships with my servant this bearer, the pore prior of Brinkburne for such injuries, wrongs, and misdemeanours as of late were committed and done to him, his brethern, their servants and tenants, as well as in taking their goods and cattelles, as presonning of their servants and tenants, setting them in the stocks wrongasly, as also putting the vicar of Felton, beyng a chanon of Brenkburn, from his cure and taking his cors prisoner, and now serving the cure by a secular preeste put in by Sir Humphrey Lisle, knight, with other attemptates committed and done by the said Sir Humphrey and others, his childrn, servants and tenants."

The Lisles and their followers suffered severely for their moss-trooping indiscretions, for finding their luck turning, they submitted themselves to the Earl of Northumberland, and were subsequently decapitated in various parts of the kingdom.

The annual revenue of the Priory of Brinkburn at the dissolution of the monasteries was £68 19s. 1d., according to Dugdale; but according to Speed it amounted to £77. The ten Canons living in this peaceful dwelling were dismissed; the buildings they had inhabited, the lands they had cultivated and the privileges they

had enjoyed were bestowed by Edward VI. upon John Dudley, afterwards Duke of Northumberland—better known perhaps as the ambitious and ill-fated father-in-law of Lady Jane Grey. In the short life time of the same monarch, Brinkburn passed into the possession of the martial family of Fenwick of Fenwick. Probably they held it in the first instance by lease, for it has been ascertained that Ambrose Dudley and his co-feeoffee, Richard Bowland, sold it, May 26th, 1571, to Sir John Forster, Knight, whose descendant, Edward Forster of Eldford, on the 18th of April, 1626, sold it to George Fenwick of Grey's Inn, London. The supposition that the Fenwicks held Brinkburn by lease, long before the absolute purchase, is founded on the frequent mention of the Fenwicks of Brinkburn, prior to that event. A George Fenwick of Brinkburn was one of the gentlemen of the middle marches as early as 1550.

The site of the old Priory buildings is occupied by the modern mansion of the present owner of the property, beneath which is a crypt, which once formed part of the ancient edifice. In Grose's time, the Priory had been converted into a farmhouse. In the view of the church, given in his work, we can just discern the Priory buildings depicted in the distance, with the character of their mullioned windows. In most vivid contrast to the disappearance of nearly every vestige of the domestic buildings, was the very perfect preservation of the Priory church. The roof and south-west angle alone appear to have suffered at the hands of Time. The disappearance of the greater part of a turret stair, in this fallen angle of the church, has led to a general misunderstanding as to its ancient purpose. It has been erroneously supposed to have led to a guest chamber or other monastic accommodation; when in reality it was the access to the triforium. This is certain for two good reasons. First, because there is no other access to the triforium or to the passage in front of the western triplet. Secondly, because there never was an instance in which a church was made a thoroughfare to a guest chamber.

The plan of the church is cruciform; having a nave 22 ft. 8 in. wide, and 70 ft. 4 in. long, with a north aisle; a chancel 37 ft. 9 in. long, and 22 ft. 5 in. wide; north and south transepts both with aisles; and a total length including the tower of 130 ft. 10 in.

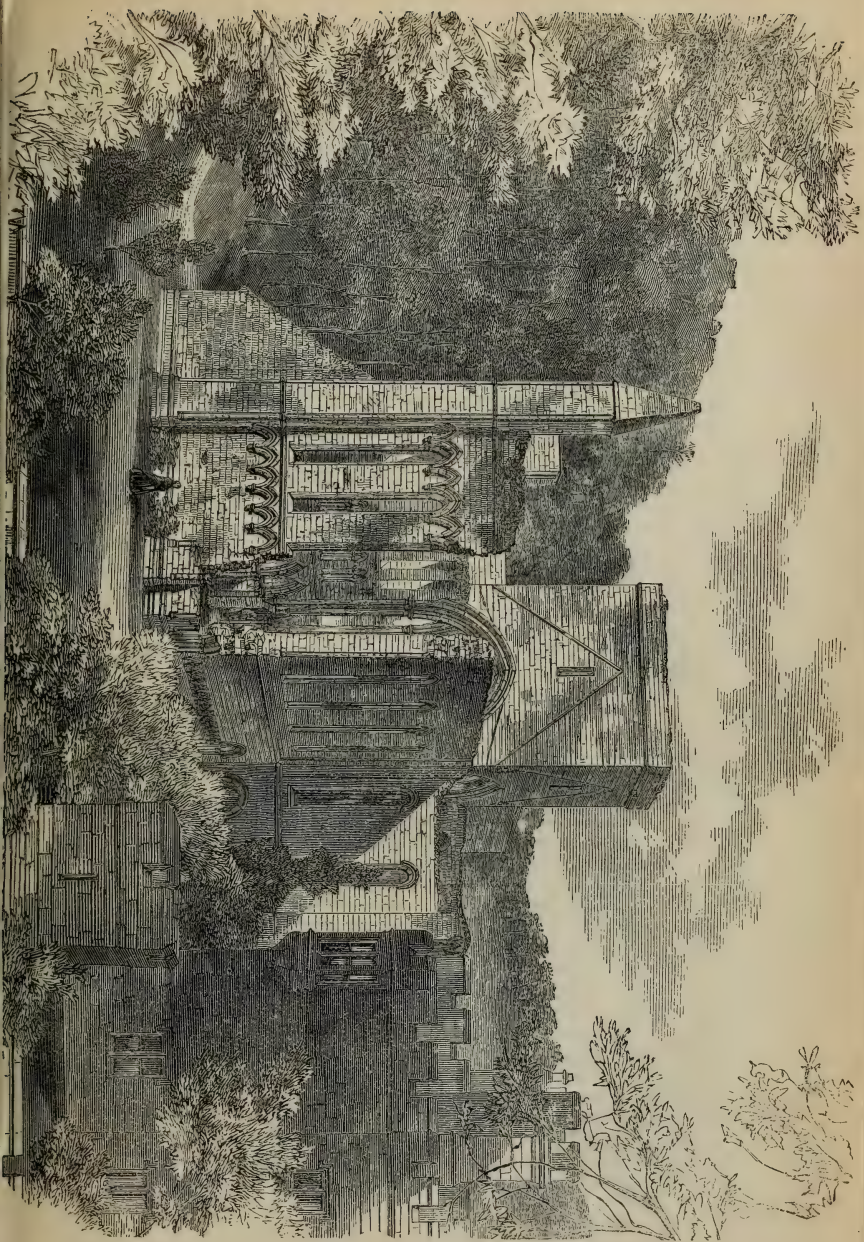
At the point of intersection there is a very low square tower; so low, that it is scarcely visible from the adjacent country. On the exterior of the south side of the nave there is a beautiful arcade of trefoil arches supported on slender shafts, which proclaim the existence of a cloister on this side of the building. The chancel is peculiar. It is lighted by three tiers of triplet windows; the two lower tiers possessing pointed arches, while the arches on the third tier are round and very plain. The doorways have circular arches. The north-west doorway stands slightly forward surmounted by a gable in which is contained three pointed trefoil arches resting on shafts similar in character to those forming part of the decorations of the cloister, but smaller in size. This doorway is richly decorated with Norman ornaments, intermixed with

the early English quatre-foil flower, and presents as beautiful a specimen of the mingling of these two styles as any we have left us.

The tower partakes of the marked transitional character of the rest of the building, being supported by Norman piers spanned by early English arches. The transepts appear to have been the only part of the building vaulted with stone; the roof of the nave, aisles, and chancels having been in all probability constructed of timber. Such at all events is the interpretation put upon the evidence by the architect, Thomas Austen, Esq., under whose auspices a handsome timber roof, covered with small tiles, has been placed over the building. The effect of this restoration is most pleasing, the quiet red hue of the tiles of the new roof making a cheerful contrast to the deep green of the umbrageous trees with which it is surrounded. Very little sunshine ever falls upon Brinkburn Church, for the shadows seem to love to linger in its quiet precincts, but when the rays of a sunset burnish the rose windows of the gables and send autumn tints quivering over the climbing foliage on the steep banks around, a scene is presented to the eye that memory will cherish after many others are forgotten.

It is impossible to find, upon the whole, a more perfect and chaste representation of the transitional period of two important eras in our national architecture, than we see in these remains. The characteristic feature of Gothic architecture, namely its thorough adaptability to the requirements of any given site, or for the wants for which the buildings were intended, are in our subject exemplified to a most charming degree; and if we except the romantic ruins of Fountains Abbey, or the grander and more elaborate remains of Tintern Abbey, there is no parallel to be found throughout England or Wales, to the choice ruins of Brinkburn Priory. The illustration which I have the honour to present to the Club is from a photograph taken by Mr. Trotter, of Alnwick, from the opposite side of the river looking upon the west end. It is engraved on wood by the eminent architectural wood engraver, Alfred Williams, Esq., of *The Illustrated London News*.

The restoration of the Church has been in contemplation for many years. It is unlikely that service has been held since the dissolution; but burials were made as late as 1745. Grose mentions that a few years before his time a scheme was set on foot, for the fitting up part of the church for the performance of divine worship; and Wallis records that a brief was obtained for that purpose. But this great and interesting undertaking has been reserved for the several members of the family who at present own this long neglected edifice, and who, with fitting appreciation of the importance of the work in an archæological point of view, have brought every accessory at command to the difficult task. Operations were commenced in the spring of 1858. It is noticeable, as a proof of the excellence of the workmanship of the Early English buildings, how well the masonry has stood the wear and tear of 700 seasons. The situation being remarkably sheltered,



but little damage was to be expected from wind; nevertheless thunderstorms and deluges of rain, with consequent floods from the river, might have been more disastrous in their consequences, but for the solidity of the foundation and strength of the masonry. The monks of Brinkburn Priory succeeded in entailing their beautiful church upon centuries of generations, and the judicious restorations now in progress will assist in furthering their endeavours for scores of generations to come.

After we have viewed our subject with all its feudal accessories of steel-clad founders, royal charters, and pious gifts of lands and woods; with all its architectural detail of tower, turret, and cloister; with fancied resonance of chant and chime still lingering in nooks; the most romantic legend in connection with it still remains untold. The fairies, dead and gone this many a weary year, are supposed to lie buried at Brinkburn. Peace be to their tiny ashes! for they could not have a more fitting place of sepulture; nor more verdant aisles than those from which the birds and bees intone their requiem.

Melrose.

By JOHN STUART, F.S.A., Edinburgh.

The history of Melrose as a religious establishment draws back to that early time when the torch of the Christian faith kindled at the shrine of Iona was soon after rekindled at holy Lindisfarne, and dispersed its beneficent light over heathen Northumbria. At that time the kingdom of the saintly Oswald extended through Lothian to the Forth, and when, with the assistance of Aidan, he had trained a colony of monks at Holy Island, he dispersed them into various religious houses which he established. One of these was Melrose, which dates from about the middle of the 7th century. Of this monastery, Eata, one of twelve Saxon youths instructed by Aidan, was the first Abbot, when Boisil was its Prior. The next Prior, who as a boy, herded his flocks in the neighbouring vale of the Leader, has, as the holy Cuthbert, left an imperishable name, not so much for the many miracles attributed to him by his biographers, as for the austere piety, unworldly self-denial, and missionary zeal, by which he awed and converted the neighbouring pagans to the Christian faith.

This primitive monastery was burned by Kenneth, King of the Scots, in his invasion of the Saxon territory, but in 875 it seems to have been rebuilt, when it became one of the resting places of the body of St. Cuthbert, when removed from its sepulchre at Lindisfarne, on account of the invasion of the Danes. Before the end of the 11th century Melrose appears to have been ruined and deserted, except for a short time between 1073 and 1075, when it became the retreat of a few monks, among whom was the historian

Turgot, afterwards Bishop of St. Andrew's, and Confessor to Margaret, the saintly queen of Malcolm Canmore. The monastery was succeeded by a church or chapel dedicated to St. Cuthbert, and dependant on the Priory of Durham or Coldingham, till between 1126 and 1136, when David I. exchanged for it the church at Berwick, and annexed it to the new Monastery at Melrose, which he founded in the latter year. This chapel became famous as a resort of pilgrims. Towards the middle of the 13th century this sanctuary was the dwelling of a monk named Aidan, reputed of great sanctity, who for twenty years never entered a bed, but slept sitting or lying before the altar of the Virgin in that chapel, at the door of which he sat during the day time reading his psalter, supplying the wants of the poor who visited the sanctuary, from a basket of provisions which he kept beside him, and bestowing his blessing upon all visitors, among whom were King Alexander II. and many of his nobles.

This venerable Monastery of Melrose was not on the same site as that whose ruins our members have now assembled to inspect, but on a promontory surrounded by the Tweed at a place now called old Melrose, about two miles farther down the stream. Yet in writing of the second foundation, it seemed impossible not to linger for a time over the first, and to feel that the glory of that humble structure which witnessed the missionary labours of Aidan and Boisil and Cuthbert, transcends that of the second, although the grandeur and beauty of the latter yet remain to charm and surprize us, while the other only survives in the dim pages of early chroniclers.

In 1136 King David I. founded the modern Abbey of Melrose, having brought thither from Rievale in Yorkshire a colony of Cistercian Monks. The church, which was ten years in building, was finished in 1146, and was with great pomp and solemnity dedicated to the Blessed Virgin, on the 28th July of that year, and the establishment soon became rich from the benefactions of the Scottish monarchs and their great subjects.

About 1321 the church was pillaged and destroyed by the English under Edward II. In consequence of that destruction, King Robert Bruce, to aid in rebuilding the church, granted to the monks all wards, reliefs, marriages, escheats, fines, amerciaments, issues, and perquisites of both Justiciary and Sheriff Courts belonging to himself and his heirs within the Sheriffdom of Roxburgh, to be held by them until they should have fully raised the sum of £2000 sterling; a gift which appears to have enabled them to erect the beautiful fabric whose ruins still remain. In 1329 the same King, a few weeks before his death, addressed to his son David and his successors a letter recommending to their especial favour the monastery of Melrose, in which he had ordered his heart to be entombed, and in which he earnestly enjoined them to allow the monks to enjoy all his donations for the rebuilding of their church, and to increase rather than diminish them. This purpose of the Scottish monarch touching the resting-place of his heart seems to have been altered

by a last thought, for we know that he gave it in charge to the good Sir James Douglas, that he should bear his heart to the Holy Land, whither he had formerly meditated a pilgrimage in expiation of his early sacrilege in the slaughter of the Red Comyn in the church of the Minor Friars at Dumfries. The history of that gallant heart will not be forgotten, which records that the good Sir James, in pursuance of his promise to the dying King, set out with his precious treasure, in company with a noble cavalcade, to bear it to Palestine, but learning that a war was going on between the Christians, under Alonzo King of Leon, and the unbelieving Moors, in Granada, he diverged thither, in order to signalize his prowess against the Saracens. In his first attack, after the defeat of the Moorish cavalry, the impetuosity of Douglas carried him away from his friends, when he was surrounded by the Moors and overpowered. Finding this, he took from his neck the casket which contained the heart of Bruce, exclaiming "now pass onward as thou wert wont, and Douglas will follow thee or die." They were his last words. On the following day the body and the casket were both found on the field. It is said that both were brought home, the body of Douglas to repose among the ashes of his ancestors in the church of St. Bride, in the little dark vale of Douglas, and the heart of his Sovereign to lie in the stately Monastery of Melrose, according to the original design of the King.

This must have been before the present building was completed, the work of which was commenced in 1326, and which is in the Decorated Style of the period. It has been asserted that some parts of the building date from the time of James IV. and perhaps we may find traces of something approaching to the Perpendicular Style of that period (rare as it is in Scotland) in the great east window, which is 37 feet in height and 16 in breadth. Sir Walter Scott's description of this great window will readily occur as both true and beautiful. The church is almost the only remaining part of the Monastery, and it is greatly ruined. The west end of the nave is gone, but from the extremity of the nave now remaining to the end of the chancel it measures about 250 feet. The transepts measure from one extreme to the other 115 feet, and the breadth of the nave and side aisles is 69 feet within the walls.

The nave has a narrow lofty north aisle, and a double south aisle, the outer one being much lower than the inner, and divided into eight chapels running the whole length of the nave. There is a buttress betwixt each window, which terminates in a pinnacle, and from these spring flying buttresses over the roof of the side aisle for the support of the main wall of the nave. Every part of the ruin bears marks of the Decorated sculptures, which have been more numerous or better preserved on the face of the south transept than elsewhere, and the delicacy of which may be traced in the doorway leading from the north transept to the ruined cloisters. The grotesque figures and clusters of plants and flowers which occur in various places are worthy of study. Among the latter are lilies, ferns, grapes, leeks, oak leaves with acorns, palms, hollies, and fir cones.

On the floor of the chancel lies a slab of polished marble of a greenish black colour, with petrified shells imbedded in it, and of a semi-hexagonal form, which is believed to cover the dust of King Alexander II. who was interred beside the high altar of this church in 1249. Within the church were likewise deposited the remains of James, Earl of Douglas, slain at Otterburn, as well as those of Sir William Douglas, the Knight of Liddisdale, the latter having been interred before the altar of St. Bride's Chapel.

In 1544 Melrose was partially destroyed by parties of English, under Sir Ralph Eure and Sir Brian Lauton, when the tombs of the Douglasses were defaced, an insult wiped out on Ancrum Moor in the following year.

Then came the period of the Reformation, when our church lands became generally secularized. After passing through several hands, the possessions of the Abbey of Melrose became at last vested in the Earl of Haddington, in the reign of James VI., from whose descendants they were acquired by the family of Buccleuch about the beginning of the 18th century.

It is probable from the pieces of burnt oak and melted lead that have been found by digging upon the site of the Monastery, that its buildings were destroyed by fire. At various times the ruins are said to have been used as a quarry for building houses in Melrose, and at last, about 1618, a part of the nave was converted into a Parish Kirk—a species of adaptation which has invariably proved disastrous to old buildings. Many of the carved stone images from the niches all over the building, which escaped the fury of the Reformation, remained till the Covenanting Iconoclasts turned their attention to them, when they were demolished.

Of the brotherhood of Melrose, it has been alleged in an old Scottish song—

“O! the Monks of Melrose made gude kale
On Fridays when they fasted;
They wanted neither beef nor ale
As long as their neighbours' lasted.”

That they had the means of making good cheer without encroaching on the larders of their neighbours, may be gathered from the following statement of the rent of the Abbey in 1561:—

Scots money, £1758.
Wheat, 14 chalders 9 bolls.
Bear, 56 chalders 5 bolls.
Meal, 78 chalders 13 bolls 1 firloft.
Oats, 44 chalders 10 bolls.
Capons, 84.
Poultry, 620.
Butter, 105 stones.
Salt, 8 chalders.
Peats, 340 loads.
Carriages, 500.

Fauna of the Mountain Limestone Formation on the Berwickshire coast, with a preliminary notice of the succession of the strata on the Eastern Borders. By GEO. TATE, F.G.S

Living plants and animals, observed within the district of the Club, have been carefully noticed in its Transactions; few, however, of the extinct organisms have been recorded. An attempt was made to fill up a blank, by the Monograph on the Fossil Plants, which was published in the "Natural History of the Eastern Borders;" and lists have been given in our Transactions of animal remains found on the Farne, at Beadnell, and at Howick. But as an excuse, why so little has been accomplished in this department of natural history, it should be recollected, that the scientific study of fossils is but of recent origin, and that the collection and accurate determination of them demand much time and labour. Materials, however, have been gradually accumulating to illustrate the Palæontology of the district, and it may be hoped, that, at no very distant period, an ample catalogue of our fossils may be completed. Meantime as "*Ars longa est, sed vita brevis*," I purpose giving, as opportunity offers and as far as I am able, lists of the extinct organisms which may be observed in localities visited time after time by the Club; but these lists will be far from exhausting the subject, for many fossils are found in an imperfect state, and do not possess the characters requisite for correct determination, while many more will remain, for years to come, locked up in their rocky cabinets.

As preliminary to these lists, a brief and general sketch of the succession and range of the strata in the border counties of Berwickshire and Northumberland will be of some use.

The formations belong to the Palæozoic Era, and in ascending order are—

- I.—The Cambrian of Sedgwick or Lower Silurian of Murchison.
- II.—The Devonian or Old Red Sandstone.
- III.—The Carboniferous.
- IV.—The Permian or Magnesian Limestone.

I.—The Cambrian or Lower Silurian rocks form the Lammermuir hills, the axis of Berwickshire; and range across the county in a west-south-west direction from Siccar Point and Burnmouth, in a belt having an average width of about ten miles. The rock is generally Greywacke and Greywacke slate. This formation is prolonged into Selkirkshire and Roxburghshire, and thence into the western part of Northumberland, where it is seen on the flanks of the Porphyry of the Cheviot on the Coquet above Philip, and again in a similar position at Whitelee on the Reed near to Carter Fell. The only undoubted organic remain discovered in this formation in our district is a Graptolite, which was found by Mr. Wm. Stevenson, on the Dye Water; he has also noticed some curious markings on slabs, for which he thinks it is difficult to account without supposing the influence of organic agency.* It

* Proceedings of the Geological Society, Vol. IV., p. 29.

is probable that Annelids are also entombed in some of the Berwickshire beds, as both Annelids and Graptolites have been discovered, in other parts of the range, at Grierston and Thornielee on the Tweed in Selkirkshire.

II.—The Devonian or Old Red Sandstone formation occupies a considerable area in the central and south-western parts of Berwickshire. There is a fine section of it on the north side of the Lammermuirs, from Siccar Point to the mouth of the Pees; the conglomerate is seen overlying unconformably the Silurian or Cambrian strata. In Northumberland we find it in Roddam Dean on the flanks of the Cheviot Porphyry, where it contains rolled pebbles and blocks of this Porphyry, evidencing that the Cheviots had been protruded previously to the deposition of the Old Red conglomerate. There is no physical break in Berwickshire between the Old Red Sandstone and the Carboniferous formation; but the limits of the former are nearly marked by the occurrence, near to the Pees mouth, of *Holoptychius nobilissimus* and *Pterichthys major*, which are fish characteristic of the upper beds of the Old Red Sandstone.

III.—The Carboniferous formation occupies nearly the whole of Northumberland, and a considerable area of the south of Berwickshire, with a small patch or two in the northern part of that county. Four groups are distinguishable; commencing with the uppermost we have: 1—The Coal Measures; 2—The Millstone Grit; 3—The Mountain Limestone; 4—The Tuedian Group.

1—The Coal Measures are a series of alternating strata of sandstones, shales, ironstone, and coal; with an abundance of remains of land plants, and, in a few beds, of Fish and fresh-water Mollusks, (*Anthracosia* King), allied to the *Unio* of our rivers. Lacustrine conditions are generally indicated.

The term "Coal Measures" usually applied to this group is objectionable, because workable beds of coal are contained in other groups, though not in such abundance and excellence of quality as in this. These Coal Measures constitute the Newcastle coal field, and occupy the triangular area in Northumberland which lies eastward of a line drawn from the mouth of the Coquet to Wylam on the Tyne. They do not extend into Berwickshire.

2—The Millstone Grit consists of coarse gritty and conglomerate beds interstratified with sandstones and with thin beds of coal. It lies at the base of the Coal Measures, and forms a narrow zone running from the mouth of the Aln nearly parallel with these Coal Measures. It contains remains of plants and Annelids. Grains of Protoxide of Iron and Garnets are found occasionally in the gritty sandstones.

3—The Mountain Limestone is a more complex group than the Coal Measures; it has similar alternations of sandstone, shale, ironstone and coal, and contains similar fossil plants; but we have indications of a new condition; for intercalated with these strata, are several limestones and calcareous shales, in which *marine* remains are abundant. The most characteristic fossils are Brachiopods, especially *Producti*, and hence some of these beds have been called

Productal Limestones. Encrinites are locally numerous, and have given the name of Encrinal Limestones to other beds.

The Mountain Limestone occupies nearly the whole of that part of Northumberland, which lies northward and westward of a line drawn from the mouth of the Aln to Riding Mill on the Tyne; but of this group, only a few of the lower beds are prolonged into Berwickshire, and they cover but a small area. One narrow strip of them extends from the mouth of the Tweed along the coast, for about five miles northward of Berwick. On the north side of the Cambrian or Silurian axis they overlie the Tuedian group, from the Cockburnspath Cove to Dunglas burn, the northern extremity of the county; but the same group of beds is continued into Haddingtonshire.

4—The Tuedian Group. In 1856, I applied this name to a series of beds, lying below the Mountain Limestone, which are largely developed on the Tweed. They consist of grey, greenish, and lilac shales, sandstones, slaty sandstones sometimes calcareous, thin beds of argillaceous limestone and chert, and a few buff magnesian limestones. *Stigmaria ficoides*, *Lepidodendra*, Coniferous trees and other plants occur in some parts of the group; but there are no workable beds of coal. The Fauna consists chiefly of fish remains, *Modiolæ* and *Entomostraca*. In one bed on the Tweed, *Orthocerata* and *Pleurotomariæ*—marine Mollusks—are associated with Coniferous trees. The whole group is especially distinguished by the absence of Brachiopods, which are abundant in the overlying Mountain Limestone. It forms a marked transitional series, intercalated between the Mountain Limestone and the Old Red Sandstone. Generally fresh-water and lacustrine conditions are indicated; and when marine remains do occur, they are accompanied with plants which appear to have been swept into a shallow estuary.

This group occupies a considerable area in the south of Berwickshire, and there are good sections on the Tweed and Whiteadder; it is exposed on the coast from Burnmouth to near Lammerton Shiel; and it is seen also, on the north side of the Lammernmuirs, on the coast between the Pees mouth and Cockburnspath Cove. In Northumberland, there are sections of it in Garmitage bank and Crawley dean, which are from six to nine miles westward of Alnwick; and the same group is tilted up against the Cheviot Porphyry in Biddleston burn, and in the Coquet below Linn Brig.

IV.—The Permian formation occurs only in two small patches in Northumberland, at Tynemouth and Cullercoats, where the Magnesian Limestone overlies the Coal Measures.

The following list is limited to the organisms observed in the narrow strip of Mountain Limestone along the Berwickshire coast; and in giving localities I use the term Berwick for that part of the coast which is near to the town.

CLASS—PISCES.

Genus—*HOLOPTYCHIUS*. Agassiz.

1. *H. Hibberti*. Ag.

A tooth in black carbonaceous shale, Lammerton, associated

with other Ganoid fish (not yet determined), plants, and large Entomostraca allied to *Estheria*. Scales of *H. Hibberti*, I have also found in Shale at Cockburnspath.

And here I may record the occurrence of a *Gyracanthus* in sandstone belonging to the Tuedian group, a little southward of Ross, as a specimen was found there by Mr. Langlands, the President, when the Club met at Berwick. This is a spine of the dorsal ray of a cartilaginous fish, analogous to that of the *Spinax Acanthias*—the Dog-fish of our coast. It is not sufficiently perfect to enable me, as yet, to identify it with any described species; the fragment is arched, and gradually tapers to a point; it is six-and-a-half inches long, and three-quarters of an inch broad; the oblique ridges covering the sides appear to be smooth. Three other species occur in Northumberland: *G. formosus* (Ag.), at Amble in the Coal Measures; *G. Alwicensis* (Ag.), and *G. obliquus* (McCoy), in sandstone of the Mountain Limestone formation, Alnwick Moor. *G. obliquus* has been found also on Langton Burn, by Mr. Stevenson.

CLASS—MOLLUSCA.

CONCHIFERA.

Genus—SANGUINOLITES. McCoy.

2. *S. arcuata*, Phil. G. Y. 2, t. 5, f. 4.
Rare in shale, Lammerton.
3. *S. variabilis*, McCoy, Pal. Foss. t. 3 F., f. 6—8.
"Rare in the Carboniferous Limestone of Berwick-on-Tweed."
McCoy.

Genus—SCHIZODUS. King.

4. *S. carbonarius*, Sow. Geol. Trans. vol. 5, t. 29, f. 2.
In shale, Lammerton.
5. *S. depressus*, Port. Geol. Rep. t. 36, f. 8.
In argillaceous sandstone, Lammerton.

Genus—NUCULA. Lam.

6. *N. gibbosa*, Flem. = *N. tumida*, Phil. G. Y. 2, t. 5, f. 15.
In shale above the limestone, Marshall meadows.

Genus—AMUSIUM. Megerle.

7. *A. Sowerbyi*, McCoy, Carb. Foss. t. 14, f. 1.
In shale, Berwick.

Genus—AVICULO-PECTEN. McCoy.

8. *A. pera*, McCoy, Carb. Foss. t. 15, f. 19.
In argillaceous sandstone, Lammerton.

BRACHIOPODA.

Genus—PRODUCTUS. Sow.

9. *P. giganteus*, Martin, Sow. M. C., t. 320; Phil. G. Y. 2, t. 8, f. 5.
Common in limestone. Berwick, Marshall meadows and Lammerton.
10. *P. semi-reticulatus*, Mart. Derb. t. 32, f. 1, 2.
In limestone, Berwick and Lammerton.

11. *P. Martini*, Sow. M. C. t. 317, f. 2—4.
In limestone, Berwick.
12. *P. punctatus*, Mart. Sow. M. C. t. 323; Phil. G. Y. 2, t. 8, f. 10.
In limestone, Berwick.
13. *P. scabriculus*, Mart. t. 36, f. 5.
In calcareous shale, Berwick.
14. *P. setosus*, Phil. G. Y. 2, t. 8, f. 9, 17.
In impure limestone, Berwick.
15. *P. Flemingii* = *P. longispinus*, Sow. M. C. t. 68, f. 1, 2.
In calcareous shale, Berwick.
Genus—CHONETES. Fischer.
16. *C. sordida*, Sow. Geol. Tr. 5, t. 53, f. 5, 16.
In shale, Berwick and Marshall meadows.
Genus—STROPHOMENA. Rufesque.
17. *S. analoga*, Phil. G. Y. 2, t. 7, f. 10.
In limestone, Lammerton. This species is not generally distributed in Northumberland; I have found it only at Belford Moor, Bellingham and Redesdale. De Koninck and Mr. Davidson think that the Carboniferous species is not distinguishable from the *Strophomena rhomboidalis*; if this be correct, the species must have existed during an enormously long period—during the Silurian and Devonian Epochs, and far into the Carboniferous Era.
18. *S. crenistria*, Phil. G. Y. 2, t. 9, f. 6.
In limestone and calcareous shale, Berwick.
Genus—ORTHIS. Dalman.
19. *O. resupinata*, Mart. Derb. t. 49, f. 13, 14.
In calcareous shale, Berwick.
Genus—SPIRIFER. Sow.
20. *S. lineatus*, Mart. Derb. t. 36, f. 3; Phil. G. Y. 2, t. 10, f. 17.
In limestone, Berwick. A common species in Northumberland.
21. *S. laminosus*, McCoy, Carb. Foss. t. 21, f. 4; Dav. Carb. Brach. t. 7, f. 17—22.
This pretty shell is ornamented by concentric lamellæ crossing longitudinal ribs. It is an interesting addition to Berwickshire fossils, and was found by me at one of the meetings of the Club, in sandstone, at Lammerton, where it is associated with *Aviculo-pecten pera*, Carboniferous plants, and Ganoid fish scales. It is rare; I have seen it in Northumberland only at Denwick, Bellingham, and Redesdale.
Genus—LINGULA. Brug.
22. *L. squamiformis*, Phil. G. Y. 2, t. 11, f. 14.
In shale, Berwick, Marshall meadows. It occurs also at North Sunderland, and at Lemmington, west of Alnwick, in beds low down in the Mountain Limestone series.
22. *L. mytilloides*? Sow. M. C. t. 19, f. 1, 2.
In shale, Marshall meadows. The specimens are more elongate than Sowerby's species.
Genus—DISCINA. Lam.
24. *D. nitida*, Phil. G. Y. 2, t. 11, f. 10—13.
In shale, Marshall meadows, associated with the abovenamed

Lingulæ. This occurs pretty abundantly at Bellingham and Redesdale, and in the Glasgow and Lanarkshire shales.

CRUSTACEA.

Genus—CYPRIS.

25. *C. Scoto-Burdigalensis*, Hibbert.

In shale, Lammerton.

A description of the new form allied to *Estheria* will be given hereafter by Mr. Rupert Jones, a distinguished authority for fossil Entomostraca.

CLASS—ZOOPHYTA.

Genus—AULOPHYLLUM. Milne Edwards.

26. *A. fungites*, Flem. M. Edw. Br. Foss. Cor. t. 37, f. 3.

In limestone, Berwick.

Genus—LITHODENDRON. Philips.

27. *L. junceum*, Flem. M. Edw. Br. Foss. Cor. t. 40, f. 1.

In limestone, Berwick, Marshall meadows, and Lammerton. A very common coral.

28. *L. affine*, Flem. M. Edw. Br. Foss. Cor. t. 39, f. 2.

In limestone, Lammerton.

29. *L. irregulare*, Phil. G. Y. 2, t. 2, f. 14, 15.

In limestone, Berwick.

Genus—LITHOSTROTION. Llwyd.

30. *L. Portlocki*, M. Edw. Br. Foss. Cor. t. 42, f. 1.

In limestone, Marshall meadows. This fine coral occurs in circular masses, convex on the upper surface, about one foot in diameter, formed by the union of numbers of prismatic star-like Corallites. I have found it also at Harlow Hill on the Tyne, in one of the uppermost beds of the Mountain Limestone, and on the Irthing near the Roman Wall.

Genus—STENOPORA. Linsdale.

31. *S. tumida*, Phil. G. Y. 2, t. 1, f. 25.

In limestone, Berwick, Lammerton, and Lammerton Shiel.

Genus—FAVOSITES. Lam.

32. *F. parasitica*, Phil. G. Y. 2, t. 3, f. 61, 62.

In limestone, encrusting *Producti*, Lammerton and Lammerton Shiel.

Genus—ASTRÆOPORA. McCoy.

33. *A. cyclostoma*, Phil. G. Y. 2, t. 2, f. 9, 10.

A rare coral. A single specimen, attached to a *Productus*, in limestone, Lammerton Shiel. I have found it also at Lindisfarne, Bellingham, and pretty abundantly at Newton-on-the-Moor. McCoy records the same species from Ireland, but under the name of *A. antiqua*.

Genus—SYRINGOPORA. Goldfuss.

34. *S. geniculata*, Phil. G. Y. 2, f. 1.

In limestone, Lammerton.

Genus—AULOPORA. Goldfuss.

35. *A. gigas*, McCoy, Carb. Foss. t. 27, f. 14.

Attached to a *Productus*, Marshall meadows.

Miscellanea Zoologica. By R. EMBLETON.

RHOMBUS HIRTUS.

Muller's Top Knot. Yarr. B. F. vol. 2, p. 243.

A beautiful specimen of this rare fish was taken in Beadnell Bay last autumn, and is now in my possession. It agrees in every respect with the description given by Mr. Yarrell; my specimen, however, is 8 inches in length, by 5 in breadth; being 3 inches longer. A specimen was taken some years ago in Berwick Bay, and presented by Dr. Johnston to Mr. Yarrell.

SYNGNATHUS ÆQUOREUS.

The Æquoreal Pipe Fish, Yarr. B. F., vol. 2, p. 335.

During the last autumn I obtained two specimens of this rare fish. From Mr. Yarrell's account, it would appear to be more plentiful on this coast, than on the southern.

Botanical and Zoological Notices. By JAMES HARDY.

BOTANICAL.

1.—*CUSCUTA EPITHYMUM*. August 1, 1859, I found this novelty to the Berwickshire Flora (for the "Eastern Border" example was Northumbrian), in a pasture field near Penmanshiel, over-running thistles (*Carduus arvensis*), *Prunella vulgaris*, *Plantago lanceolata*, *Medicago lupulina*, &c. Possibly it may have been introduced with clover; but as this part of the field was a moor not many years back, it may equally claim to have originated from seeds left in the soil while in its unreclaimed state. It was confined to one spot.

2.—*DANTHONIA STRIGOSA*. As an agricultural weed in cereal crops, this is fully as worthy of record as the Wild Oat (*Avena fatua*), which is scarce in the Lammermoors, while *D. strigosa* is common. It does not lie in the soil like the wild Oat. There is a white variety, which may be the 'Argyle Oat' of Lawson, which is difficult to detect if one undertakes the trouble of picking seed Oats.

3.—*HABENARIA VIRIDIS*. Of this Orchis, thinly scattered over the Borders, compared with some parts of the North of England, I met with instances on the sea banks behind the Preventive Service houses, Redheugh, and again at the foot of Cheviot near Langleyford Hope—single specimens only.

ZOOLOGICAL.

1.—*MULLUS BARBATUS*. Mr. Wilson sent me a specimen of this rare fish from Coldingham.

2.—*ACMÆA TESTUDINALIS*. This shell may be looked for on the Berwickshire coast. I have one slightly worn from shell-sand at Greenheugh, where the accompanying shells did not appear to have travelled far.

3.—*ACHERONTIA ATROPOS*. Two Death's-Head Moths have reached me this summer, from the vicinity of Cockburnspath. The caterpillars were general in 1858, and, that year, I had two of the moths from East Lothian.

4.—HIVE BEE CARRYING FROM GRASS, &c. In the Scottish Gardener, vol. III, 1854, I have recorded a long series of Wild Plants, 81 being enumerated, to which the Hive Bee resorts for honey or pollen. On the 4th July, 1859, I was greatly surprised to find a Bee engaged in detaching the pollen from the florets of *Holcus mollis*. This was near half-past 7 in the evening, when the day's labours were nearly over in the hive. It rested on the flowers, and rubbed the anthers with its legs, scattering by this means the pale sulphur-coloured dust, of which it obtained a considerable quantity. The Common Dock (*Rumex obtusifolius*), and the Knot Grass (*Polygonum Avicularia*) yield honey on several occasions, as I have observed.

5.—A DRONE-BEE SEARCHING FOR HONEY IN FLOWERS.—It is generally believed that the Drone-Bee makes no effort to obtain food out of doors. The following is a single instance to the contrary. On the 28th July, 1854, being in one of our deans, I witnessed a Drone alight on the flowers of the wild Angelica, (*Angelica sylvestris*), whose shallow cups are of a depth proportioned to its short feeble proboscis. I stood beside it and watched it from the instant it alighted, and it went on deliberately probing each floret that came within its reach. Flying off, it spent a few seconds upon the Meadow-sweet, but speedily correcting its mistake, it sped once more to the plant that first attracted it. Altogether I pursued its course from one umbel to another, for about five minutes.

PROCEEDINGS

OF THE

BERWICKSHIRE NATURALISTS' CLUB.

*Address delivered to the Berwickshire Naturalists' Club, at
Whittingham, September 13th, 1860. By RALPH CARR,
Esq., President.*

GENTLEMEN,

AT our Anniversary Meeting it is the President's pleasing duty to lay before you as accurately as he can, a record of what has been done by the Club during the twelvemonth, and especially to leave a succinct memorial of those happy and social field-meetings, which to all of us, I trust, have brought not only hours of enjoyment mingled with instruction, but also some accession of bodily health and energy. In my own case I feel certain that it is hardly possible to respire the air of a new district, lying perhaps not many miles from home, but nevertheless upon a different geological formation and a different subsoil, without perceiving that the earth communicates something of its character and properties to the air, and that when man is not indolent and inactive, a corrective and a cordial are prepared for him in the atmosphere of every new locality to which business or reasonable relaxation may

carry him; so that not only the moorland or the sea-cliffs are good after the city, but he who dwells in the purest upland valley finds that a long day's ramble in some populous neighbourhood, between full hedgerows and among fields rich with the manure contributed by towns, has given him unexpected buoyancy and vigour, together with an appetite which the breeziest hill near home could not impart to him.

For an account of the Meeting held at Wooler, in September last, the club is entirely indebted to our indefatigable Secretary, Mr. Tate, whose researches into the antiquities of our district added to his great attainments and experience as a geologist, render even his passing remarks of more than ordinary weight and value.

“There was a large attendance of Members at the Anniversary Meeting at Wooler, on the 29th of September, 1859; but as the Members arrived at the place of meeting, at different periods, in the course of the forenoon, they started off in separate parties to view the objects of interest in the neighbourhood.

“The day was unfavourable for natural history observations, as the various exploring parties encountered storms of wind and rain among the hills. One party visited Yeavinger Bell; another wandered towards the Kettles, Middleton Hall, and Middleton Bog; and a third examined the Humbleton Terraces.

“A numerous party took the route to the Kettles, a large camp on a narrow long hill, singularly protruded between two higher hills, from which it is separated by deep rocky ravines. The outer rampier of this Camp encloses an area of between three and four acres. Wallis calls it the Maiden Castle; and it is sometimes also called Greenside. Not far distant from it, to the west, is a prominent conical hill, known as the Cup and Saucer Camp, an ancient fortlet, resembling not a little the Mote hills of other parts of the county. The party walked onward to Middleton Hall, where they were hospitably entertained by Mr. Hughes. Here they saw a specimen of the head and antlers of the *Cervus Elephus* which had been taken out of Middleton bog. This bog was afterwards visited, and

the party set to work to exhume bones and shells. A rib and some Vertebrae of the Red Deer, several freshwater shells, and a piece of Bog Iron Ore were obtained and shewn at the Meeting by the Rev. J. Baird.

“This bog is at a short distance from Wooler water and but little above its level; it occupies an area of about four acres and is surrounded on all sides, except on the north, with hills formed of boulder clay and gravel, which flank the higher elevations of the Cheviot porphyry. The following is a section of the deposits in descending order.

Peat, in which are prostrate trees of Hazel and Birch and also Hazel Nuts, from 2 to 4 feet in thickness;

Marl, in which have been found skeletons of the Red Deer, teeth of the Boar, and great numbers of freshwater Shells of species still living in the district, 8 feet in thickness;

Blue Clay a few inches, and

Boulder Clay and Gravel.

“The Shells forming the marl are species of the genera *Limnæa*, *Succinea*, *Planorbis*, *Valvata*, and *Cyclas*. Three noble skeletons of the *Cervus Elephus* have been found nearly entire; one of them, Mr. Hughes estimated, from the length of the thigh bone, to have been fifteen hands in height, which is about one foot higher than the usual size of this animal.

“These facts give a tolerably distinct history of the succession of events on this spot. During the Boulder Clay period, the district was covered with water up to a considerable height. This period with its sub-arctic climate, its glaciers and floating icebergs passed away, and the present conformation of our Island was to a great extent assumed. At the base of the Middleton Hills a small lake was left, in which for several ages Mollusks lived and bred, for the accumulation of eight feet of marl, chiefly formed of their shells, indicates a considerable lapse of time. A few land shells were washed into the lake, and Deer and Boars living along the margin or coming to it to drink, occasionally found a tomb beneath its waters and were covered over with fresh deposits of marl. In the course of time the waters were partly drained away, but the

ground being still watery and adapted for the growth of mosses, peat was formed over the marl, and trees and bushes growing around were, time after time, carried by floods into the marshy ground. Though drained, the place is still a damp bog.

“From the Kettles I strolled along to Humbleton Heugh to see the terraces, regarding which strange theories have been proposed. Two of these so called terraces, I noticed, at different levels, on the north side of the Heugh; the highest being about 20 feet above the other. Neither of them are quite level; the upper one is somewhat rounded, with the greatest slope towards the Heugh; the lower is about 30 yards wide and more nearly level. Hutchinson conjectures that these terraces have been formed by art, for the purpose of marshalling the Militia of the County and showing them to advantage. Pennant inclines to a similar notion. This, however, is a mere fancy, destitute even of probability. These terraces are formed on gravel, which lies at the base of the porphyry hills, and which had been accumulated when the whole valley of the Till had been filled with water. As the land emerged from the water, especially along its shores, places more or less level would appear; such places near the Heugh have been further levelled and trimmed by art, and used by the early inhabitants of the district for the purposes of cultivation. Some broad and irregular ridges and furrows running along these terraces I consider evidences of this ancient cultivation.

“Several Members on their return to Wooler went to the hill on which the Castle stood. Here, indeed, were its remains overthrown in huge masses apparently by the force of gunpowder. The following extract from a record in the Tower of London and translation of an Inquisition shew that the Castle or Tower of Wooler had been erected previously to the reign of Henry III., and was even in 1254 in a ruined state.

‘Hæc est pars Isabellæ de Forde de terris et tenementis quæ fuerunt Roberti de Muscampe quæ dividitur in duas partes.

Pars prima

Una Medietas

Dicta Isabella habuit Medietatem tertiæ partis Capitalis Mesuagii de Wolloure quod quidem Mesuagium est quædam Mota vasta nec est alicujus valoris.'

'Translation of an Inquisition taken on the death of Isabella de Forde by virtue of a Mandate, dated 12th day of Feb. 39 Hen. 3. 1254.

'An Inquisition made at Wooler in the Vigil of Palm Sunday, in the year of the reign of King Henry, the son of King John, the thirty-ninth, by the Lords William of Muschamp, Robert of The Manor, Simon of Lucker, Knights; Thomas of Akilde, William of Stainsby, Thomas the Forester, Adam Ippejoy, Robert of Heddon, Walter of Fenton, Walter of Hextildisham, Hugh of Heddon, Warine of Belford. They say that Isabella of Forde had a third part of the capital mesuage of Wooler, which messuage, indeed, is a certain waste fortress, and is not of any value.'

"The various parties were re-united at dinner, when there were present—the President, Messrs. J. P. Selby, Geo. Culley, Wm. Boyd, Geo. Hughes, P. Hughes, S. Dudgeon, J. Church, J. Church, jun., C. R. P. Bosanquet, G. L. Broadbent, C. Rea, Jas. Grey, Geo. Tate, the Rev. J. Dixon Clark, A. Procter, H. Parker, and Dr. Marshall; and as visitors the Rev. Mr. Green, and Messrs. G. Rea and Dr. Alexander.

"After dinner, the President read an able and interesting address.

"Mr. Wm. Boyd exhibited specimens of *Calamintha asinos*, found by him in fields near to Doddington—a plant rare in our district. Mr. Tate showed a fine quarter gold Noble of Richard II., found in Warkworth Church Yard. The obverse has RICARD DEI GRA REX ANG; and on a shield within a rose having trefoils in the inner angles, the arms of England and France are quartered, those of France, seme-de-lys. The reverse has EXALTABITVR IN GLORIA, and within a rose is a rich cross fleurie, with lions passant in the angles and a fleur-de-lys above each limb of the cross. The legend—he *shall be exalted in glory*—probably refers to the glory which the kings

of England would attain when France was conquered.

“On the nomination of the President, Ralph Carr, Esq., of Hedgley, was elected President for the ensuing year; and Mr. Chas. R. P. Bosanquet and Mr. Lomas were elected Members. The Rev. J. D. Clark proposed as a Member the Rev. Mr. Green, of Wooler, and Mr. Hughes proposed Dr. James Alexander, of Wooler.”

At the time of that meeting I was far away from home, but it was evidently one full of interest. In the extract from an Inquisition held at Wooler in the reign of Henry the 3rd, communicated by Mr. Clark, we find the word *Mota*, in old French *mote* or *motte*, used in its primary sense of a mound cast up or escarped for the purpose of fortification, and thence for the castle or stronghold which often stood upon such escarped ground. At a later period our English term moat came to be applied not to the rampart but to the ditch. But this is a secondary application to the word.

I only make this observation because it is of some consequence in considering the probable etymology of the Mote Hills at Elsdon, and at Wark on North Tyne. It has been too hastily conjectured that the appellation arose from some of the Saxon gemots, mots, moots or meetings for the public business of the neighbourhood having been held on these hills. But in the first place they are called “mote hills” not moot hills, and in the next there is a want of all positive evidence that courts were ever wont to be assembled thereon.

But to return to our transactions of last autumn:—

Berwick Meeting, October, 1859.

I regret to say that neither was I present at this much smaller gathering of our members, when any accession would have been useful. For with part of my family I had sailed in September, for Gibraltar, on a short visit to the south of Spain, from whence we could not return until well on in November.

The meeting at Berwick, in October, was but poorly attended; there were present Major Elliot, the Rev. W. Darnell, Dr. Clark and Messrs. Home, Logan, Church, sen., Macbeath and Embleton. After dinner it was resolved, that in future

the meetings in September and October should be held on the second Thursdays of these months.

The following places were appointed for the meetings of the Club in 1860. Chirnside on May 31st; Ellamford on June 28th; Ford, on July 26th; Whittingham, on Sept. 13th; and Berwick, on October 11th.

Chirnside Meeting, May 31st, 1860.

To attend this day's excursion, my first in the capacity of President for the year, I enjoyed the benefit of my neighbour Mr. Langland's hospitality, sleeping at his house the night before, and accompanying him from Bewick to Belford at an early hour in the morning, where we met with some brother members also on their way into Berwickshire.

But by the same train I was met by a member of my own family, who brought me a telegram which had just been received, requiring me to go to London, and with very great pain I felt myself compelled to give up all hope of a day with our friends at Chirnside. There could not be a more unpropitious beginning to my duties in the chair, and I only trust that my exit may be of better omen. Mr. Tate's and Dr. Stuart's notes of the day, are an available and valuable reminiscence of the day's ramble and its principal results.

"There was a goodly muster of Members, at this the first meeting of the year, at Chirnside, on May 31st; there being present Messrs. Langlands, Home, Clay, Stevenson, Macbeath, Turnbull, Huggup, Wm. Boyd, J. Clay, C. Rea, Tate, Sanderson, F. R. Wilson, Dr. Stuart, the Rev. J. Dixon Clark, and Wm. Darnell; and as visitors, Mr. Green and the Rev. Mr. Wilson.

"After doing justice to the well-furnished breakfast table of Dr. Stuart, the Members visited Chirnside Church, a mean and uneccelesiastical looking structure, though still retaining some characteristic remains of the old Norman edifice in the round piers, cushioned capitals, round arch, and cherson ornament of the south-western door. While here Dr. Stuart read some notes on the history of the Church and on other Antiquities in the neighbourhood of Chirnside.

"Dr. Stuart gives the following notes of our ramble:—

‘Leaving Chirnside, with its gardens embowered in apple-blossom, we entered the grounds at Nine-wells by the North Gate. The fine avenue of Elms, which line the approach, are well worthy of notice, their gnarled boughs and stately growth indicating a great age. There are few plants botanically interesting to be found here, but the trees in the park are well-grown and picturesque in their shape. Following the banks of the Whitadder, we entered the grounds of Whitehall. The woodlands here are extremely fine and there are beautiful specimens of the Common Yew, Spanish Chesnut, Oaks and Limes, dotted over the grounds. Two very fine specimens of the Norway Pine, close to the old house, attracted particular attention. The *Viola odorata* under the plane trees and thorn bushes at the Blue-stone ford, is surely wild. Removed as it is from the neighbourhood of gardens, and the large space of ground completely carpeted with it, would, I think, incline most botanists to come to this conclusion. In March, the banks are completely covered with the deliciously scented blossoms of this interesting plant, and at that early season, it is truly one of Flora’s gems. The *Anacharis Alsinastrum*, was observed in the pools of the river, below the Blue-stone ford, where it collects in matted beds, till a spate occurs, when it is carried to the sea.

‘The fishers on the Whitadder maintain that, since this plant has appeared in the river, the trout have been larger and better fed, owing to the harbour it affords to water insects, &c., otherwise it certainly is no friend to the fisherman. Pursuing our walk by the river banks, we passed on to Edington Mill, where we crossed the river, and examined the precipitous banks for specimens of petrified moss. The process of petrification, constantly proceeding, may be thus described. The water charged with calcareous matter, percolates through the mosses fringing the rocks. The mosses acting as a filter, retains the calcareous particles, and ultimately becomes a solid mass. This is so perfectly performed, that a botanist by examining the petrification, can identify the species of moss, so petrified. It is found that *Hypnum commutatum* is the most common variety so consolidated. The specimens of this fine

moss, to be found here, are remarkably beautiful, both as to colour and luxuriance and—if endowed with “a keen cryptogamic eye”—the fructification, which is rare, may occasionally be detected, by the patient observer. The only other plant worthy of botanical notice seen in our walk, was the *Vicia sylvatica*, not yet in flower, which hung in festoons over the precipitous rocks at Edington Mill. This is one of the finest of our native plants, and Sir W. Scott writes describing its beauties—

Its pale and azure pencilled flower
Should canopy Titania's bower.'

“Several excellent sections of the Tuedian or lower carboniferous group of rocks were examined, especially the sandstone quarry at Edington Mill which contains plants, entomostraca and fish; and the bold cliff below Hutton Hall where beds of sandstone, marly limestone, and shales with veins of selenite (or crystallized sulphate of lime) furnish a good type of this group of rocks.

The Rev. J. D. Clark gathered the *Carpinus betulus*, or Hornbeam, in the White Hall woods, where, however, it has been introduced by planting.

A few beetles were taken by Mr. Wm. Boyd, viz., *Clivina collaris*, *Byrrhus fasciatus*, *Cryptohypnus quadripustulatus*, *Mecinus semicylindricus* and *Quedius ruficollis*. After dinner he also showed to the club a good collection of Beetles from Hetton; and several specimens of *Acmea testudinalis* found by him at Spittal, near Berwick.

Two excellent papers were read and listened to with great interest; one from Mr. John Stuart, F.A.S., Edinburgh, on Chirnside, and the other on Hutton Hall, by Dr. Stuart.

The Rev. Mr. Green, of Wooler, and Dr. Alexander, of Wooler, were elected members; and the Rev. Wm. Dodd, of Chillingham, Mr. Robert Douglas, of Berwick, and Dr. M'Watt, of Dunse, were proposed.

This the first meeting of the year was felt by all to have been pleasant and instructive; the day was favourable, the scenery passed through was beautiful, and the several objects visited gave rise to agreeable conversation and discussion.”

Ellamford and Abbey St. Bathans, June 28th, 1860.

At this gathering I was able to bear a part and to enjoy a long drive and subsequently a walk through a country altogether new to me. The afternoon, however, was very showery, though it ultimately cleared up and left us all in cheerful mood, rewarding our perseverance by the most beautiful lights of a declining sun over the fine landscape which lay before us as we returned homeward to dinner at Dunse. Of that social repast I was very much concerned not to be able to take my share, nor to be forthcoming in my official capacity, being obliged like my friend Mr. Dickson to take some refreshment an hour earlier, in order to be able to catch the train for Newcastle, on account of business quite beyond my control.

To the Secretary and to Mr. Langlands the club owes the following valuable memorials of the day's proceedings:—

“Ellamford being situated among the Lammermuir Hills at some distance from the railway, it was found necessary to alter our ordinary arrangement, to enable the club within a limited time to examine the district selected for the June meeting. Accordingly it was agreed that the rendezvous for breakfast should be Ellamford, but for dinner, Dunse. Notwithstanding the difficulty of reaching the place of meeting and the threatening state of the weather, there was a fair muster of members at Dunse on the 28th of June. Some, indeed, had arrived on the previous day, that they might be ready for an early start for Ellamford; and some too, in consequence of there being no later train from Dunse than that which leaves at 5 p.m., remained there till the following day.

There were present—the President, Messrs. Embleton, Langlands, Home, Dickson, Pat. Dickson, Turnbull, F. R. Wilson, Stevenson, Watson, Douglas, Macbeath, Sanderson, Tate, and Dr. M'Watt; and as visitors, the Rev. Mr. Davidson of Abbey St. Bathans, and Mr. Peat of Dunse.

Only five of the members, Mr. Embleton, Mr. Stevenson, Mr. Turnbull, Mr. Langlands, and Mr. Wilson ventured as far as Ellamford. Most of them, however, visited Abbey St. Bathans and Edins Hall. Mr. Langlands has furnished the

following notes of this route.

‘There is scarcely anything left at Abbey St. Bathans of the ancient nunnery. Some years ago a part of a doorway was to be seen within the burial ground, but all vestiges of it have been removed. A small window still remains in the eastern gable of the Kirk. It has been partly walled up to hold a common window frame, above which two circular headings may be seen; these have rested in the centre on a shaft by which the window has been divided. Above them and between them, there has been a circular opening which is now filled up by masonry, and which has narrowly escaped being made use of as a passage for the flue of the stove inside the kirk. The wall is very thick and much splayed, evidently showing that it has formed the *inside* of the window, the present kirk having been erected against the outside of the wall.

‘Underneath the seat of one of the pews, close to the pulpit, there is a carved monumental stone on which is represented a recumbent female figure, the head-dress indicating that she had been an Abbess or Nun. It was found built into the north wall of the kirk, and was removed to its present position a few years ago, where it is entirely safe from damage, but cannot be seen. A drawing of it might very properly accompany our transactions, for the sake of preserving and making known an illustration of ancient dress.

‘Edins Hall, which is about a mile from Abbey St. Bathans, on the north-east side of Cockburn’s Law, has been accurately described in the transactions of the club for 1850, by the late Mr. James Turnbull. It is a very interesting place, and evidently of very remote antiquity, if not one of the most ancient edifices in the kingdom, and probably belongs to the same æge as the numerous camps which are found throughout this district. It is very similar and bears a strong resemblance to the burghs of Orkney and Shetland, as may be seen by a comparison of the ground plan with those of the burghs, which are contained in Barry’s Orkney and Hibbert’s Shetland. It is reasonable therefore to assume, that its antiquity is very much higher than that which popular tradition has assigned

to it, as a palace of King Edwin, who reigned in Northumberland in 617 to 633. The dilapidations and decay of this singular edifice, which Mr. Turnbull lamented ten years ago, still goes on, and have obliterated some of the distinctive features, which were then easily discernible. Is it not possible that something might be done to preserve it from further injury?

‘Our party proceeded to Dunse by the banks of the Whitadder; the enjoyment of the beautiful scenery being greatly enhanced by the opportunity afforded for studying the interesting sections of the geology of the district, under the instructive guidance of Mr. Stevenson. The sections about Cockburn Mill, where the junction of the silurian and old red sandstone series is to be seen, and the green stone dyke crossing the river above the Mill, are especially interesting. We hope that Mr. Stevenson will, ere long, favour us with a paper on the geology of Berwickshire, a district which he has so thoroughly examined.’

“Though I had reached Dunse on the preceding evening I was scared by the weather from accompanying Mr. Stevenson to Ellamford, and I contented myself with a solitary ramble up the Whitadder, commencing my examination of the rocks a little above Broomhouse. A considerable time I spent on a bold section at Cannebs, where I found *Modiolæ*, *Entomostroaca* and *Fish*, characteristic of the Tuedian or lower group of carboniferous rocks, which extend up the river as far as Preston Bridge. Afterwards, I visited the old red sandstone of Preston Haugh, where Mr. Stevenson discovered *Holoptychius Nobilissimus*, a characteristic fish of the old red sandstone, and I thence proceeded to Cockburn Mill where there are interesting junctions of the greywacke and old red sandstone, as well as intruded igneous rocks.

No plants, save common species, were observed; but the *Geranium pratense* attracted attention as it grew in great beauty and profusion on the banks of the river.

Several members in the evening visited Dunse Castle, and strolled over the beautiful grounds in the midst of which it is placed, and admired especially the noble avenue of Lime

trees. Near to the castle is the Hen-poo, a fine sheet of water, and while observing the *Anacharis Alsinastrum* growing there in abundance, they had a vivid reminiscence of the founder of the club, the late Dr. Johnston, for it was in this pool or lough that, in 1842, he first discovered this plant.

A visit also was paid to Dunse Law, a round hill about 700 feet above the sea level, overlooking the town and commanding an extensive view over Berwickshire and into Northumberland. It has been formed by the protrusion of basalt through the old red sandstone. The summit is a plain of about 30 acres in extent; and here are the remains of the Covenanter's camp which was occupied by a Scottish army under Lesley, in 1640; but other and older defensive remains are traceable, which indicate that the hill has been crested by a fortlet, the work of the early inhabitants of the district.

The scattered parties were re-united when the dinner hour—six o'clock in the evening—arrived. After dinner, the members proposed at last meeting were elected, and the Rev. John Brook of Houghton Shiffnal, Mr. Geo. Peat of Dunse, and Mr. Wm. Kell of Gateshead, were severally proposed and seconded.

An able and elaborate paper was read by Mr. Turnbull on Abbey St. Bathans; and some notes on the distribution of *Acmea testudinalis* by Mr. Tate."

I will only add that, in my opinion the club might venture without any risk of intruding disagreeably or unwarrantably upon the territorial feelings of a proprietor, to request Mr. Langlands in the name of the club, and as its recent president, to write to the owner of the estate on which Edins Hall is situated, to apprise him that dilapidations of which he is probably not aware are going on, by which that most precious relic of ancient native masonry and design, perfectly unique in this part of Britain, is in great danger of being irretrievably impaired. I cannot entertain a doubt that such a representation conveyed in terms such as our late President would not fail to employ, would be favourably received by any gentleman so appealed to, and that measures would be taken to surround the structure with some description of fence of an appropriate

and efficient character. Nothing but the necessity of reaching Newcastle that night, would have prevented me from accompanying Mr. Langlands to examine this, the great attraction within our beat.

Ford Meeting, July 26th, 1860.

We now come to the memoranda of a charming day's occupation, in a country of great natural fertility, and of a conformation so simple yet so grand and imposing, that well it merits overhead a warm summer's sky such as we then enjoyed, diversified by bold masses of cloud, throwing their occasional shadows over portions of the noble valley, or giving new character every half-hour to the long wave-like sweeps of old Cheviot and his kindred heights of porphyry. These hills have their own peculiar charm as much as any under the sun, and to those whose infancy has been passed within sight of them, their simple but severe and decided outline, is never regarded without mingled love and veneration, from however great a distance. As I am about to draw no less largely upon the Secretary than heretofore, in regard to our peregrinations after leaving the hospitable breakfast table, and as I have received from Mr. Frederick Wilson a valuable account of Ford Castle, of the Church of Ford, and of the mortuary Church at Etal, as also an instructive paper embracing the same and other objects from Mr. Dickson, I feel that something by way of original contribution ought to be offered by myself. Whilst we are contemplating Cheviot from so advantageous a position as this presented by Ford, I will venture to lay before the club some inquiries into the probable etymology of a name so familiar to us. If we proceed in such an inquiry cautiously and inductively, after the examples of Camden and George Chalmers, when engaged in similar researches, we shall perhaps not go very far astray.

It is a disadvantage that no similar word occurs on either side of the border in connection with our moorland summits; for there is no greater aid in etymology than the light which words of similar character often throw upon each other.

To make the best, then, of a difficult and apparently isolated question, let us approach old Cheviot with all diffidence,

and see whether he will speak for himself in any intelligible way, if we question him in the best Cambro-British we can muster. Let us take as our guide, Owen Pugh, the learned author of a very copious Welsh lexicon and thesaurus; consulting also Zeuge, the eminent German elucidator of the Celtic tongues, in his great work the "*Grammatica Celtica*." Yet before any one can make use of even the best philological works for a purpose of this kind, his ear must have some familiarity with the language, and he should have some practical notion of its character drawn from his own experience. All I can say is that, having at an early period of life taken considerable pains to understand the principles of the Welsh language, and to be able to pronounce it with tolerable accuracy, I was in a short time so much captivated by the wonderful beauty of its structure and the inherent poetry of its composite expression descriptive of natural objects, that during a tour in North Wales, the nomenclature of the natural features of the country gave me, if possible, more delight than its charming mountain scenery.

With these moderate means of forming a correct judgement, let me come to close quarters with Cheviot.

In the first place, then, is there any element in Cambrian nomenclature which can throw light upon the name? For it was undoubtedly imposed upon our border mountain by a Cymro-British race of men, speaking a language not essentially differing from that now heard in the principality, as exhibited in its older written forms.

Even as we enter within that most interesting territory by way of the vale of Langollen, there rises before us a grand mountain range called *Chefn Uchaf*. Now *Chefn* signifies a ridge, and *Uchaf* lofty. If we turn to Owen Pugh in his admirable thesaurus of the language, we find "*Chefn*, subst. masc., plural *Chefnau*; the back, the upper side, a ridge: as *Cefn a dir*, a ridge of land; a long extended mountain."

In South Wales again, with a slight dialectic difference of spelling, we find that the remains of Llewellyn lie in the earth at *Cefn y bedd*, the "ridge of the grave;" his body having been carried to higher ground from Cuam Llewellyn,

where he was slain, the *comb* or vale of Llewellyn.

It must here be noted that the *c* in Welsh though properly having the force of *k*, yet before *e* is apt to slide into its softer sound of *ch* English; moreover that *f* has the power of our English *v*, unless when doubled. *Chefn* therefore readily becomes *Cheven*. The plural formation is *Chefnau*, pronounced nearly *Cevnäi*, ridges.

I do not at all apprehend that this etymology of the first syllable of Cheviot will be rejected by any Celtic scholar, although I have not the slightest pretension to such a title. My fear is only, that in one or other of the many antiquarian or topographical works and treatises that are unknown to me, the same etymon may have been much better demonstrated, so that I may be wasting the hearer's or reader's time. What concerns us next, is to give, if we can, any satisfactory account of the concluding syllable, *ot*.

It is hardly necessary to mention that in Celtic composite words or names, it is the latter member which modifies or describes the former. Thus, in Welsh, *Dinas* is castle and *Bran* is crow or daw, and *Dinas Bran*, (castle-crow,) corresponds to crow-castle in English. *Moel* is mountain, *hebog* hawk; and *Moel Hebog* is the appellation of one of the highest hills in the country. *Crib*, a crest-like summit; *Crib goch*, Redcliff. Such being the well-known character of British descriptive names, examples of which might be multiplied to a great extent, we have to consider whether there is any noun or adjective in the copious Cambro-British vocabulary which might naturally suggest itself as descriptive of our Northumbrian heights, when brought into composition with *Cefn*. That which I am about to mention is only from conjecture, and may be set aside in case of a better claim being presented for another, but meanwhile I think there is some likelihood that *od*, snow, may have been the element in question. As this is a point which Celtic scholars may hereafter reduce almost to certainty on evidence not now forthcoming, it is right to mention that another element had presented itself to my mind previously, which on account of the various Saxon English names of localities among the Cheviots, derived

from the Red-deer, ought not to be left out of consideration. This word is *hydd*, (pronounced hudth,) the Hart or Red-deer; from which native species we have the well-known designations of Hartlaw, Hartside, Hindhope, Deer-bush-hill, Darden, &c. To show the honour in which it was held among our British ancestors, I will venture to insert the following beautiful ancient proverbs from Owen Pugh.

“Addug yr hydd i’r maes mawr:”

“The longing of the Hart is for the open wild.”

“Nid boneddig ond hydd.”

“Nothing is so noble as the Hart.”

But leaving this word in the background, there does seem to me to be a reasonable presumption that “Cheviot,” in the old British tongue, was equivalent to “Snow-fell,” or “Snow-fells.”—

Let us resume the Secretary’s notes.

“Heavy and long-continued rains had fallen during the month of July, but fortunately the club enjoyed a rainless and pleasant day, when they met at Ford on the 26th of that month. A large party assembled at breakfast, and partook of the hospitality of the Rev. Thos. Knight, one of the oldest members, who was president of the club in 1839. A good meeting might have been expected, as the district around abounds in objects of interest; there are the quarries and pits with their fossils, illustrating the lower beds of the mountain limestone, and there are the sections down the Till belonging to the Tuedian group of the carboniferous system; the Horse Bog yields the *Myrica Gale* and other plants; the camps on Broomridge and other hills, and the barrows near to them give memorials of the earlier inhabitants of the district; there is the inscribed rock at Rowting Linn with its unsolved mystery; and there are the castles and churches of Ford and Etal, and the battle-field of Flodden so fatal, in 1514, to Scotland. The variety of objects courting examination caused the club to divide itself into two parties.

One party, led by Mr. Wm. Boyd, took the route to Rowting Linn, where the *Osmunda regalis* was discovered by the late

Mr. Mitchell, one of the members; but not a single plant could be seen by the party; and it is to be regretted, that this noble fern appears to be entirely extirpated in this picturesque locality. The ruthless manner in which plant-fanciers, and even some botanists pounce upon rare plants, especially ferns, tends to destroy some of our choicest floral treasures. From this cause, the *Asplenium septentrionale* is becoming scarce on Kyloe Craggs; indeed most of the accessible specimens have been carried off; fortunately, however, several plants remain in the higher cliffs of this basaltic range. Botanists imbued with proper feeling, rather than enrich their Herbariums at the risk of extirpating rare plants, will leave them 'to bloom on their ain native braes.'

The party saw the waterfall to advantage, for the burn, swollen with the late rains, poured over the cliff, in an unbroken sheet, into the Linn below. After viewing the mysterious written rock they wended their way back to Ford, but failed to notice any plants or animals, but what are common. The Rev. J. Baird, however, on his way to the meeting discovered *Silene noctiflora*, in great abundance, in the sandy fields through which the road passes between the Red Scaur Bridge and the Fentons.

A larger party, under the guidance of the Rev. Delaval Knight, proceeded to Ford Church and Castle and thence to Etal.

After leaving Etal Castle, the party were ferried across the Till and strolled onward to Brankston, enjoying the fineness of the day and beguiling the time by keen, though friendly, discussions on Darwin's new work on the origin of species, on the succession of rocks along the borders, on the primæval relics of man, and on the wonderful history of the formation of coal. The tenor of our thoughts was changed on our arrival at Brankston, where we were hospitably entertained by the Rev. Robert Jones, from whom we received full and accurate information respecting the site of the battle of Flodden. Mr. Jones now became our guide. For a short time we turned aside to see the little church of Brankston, a greater portion of which was not long ago rebuilt. Most of

our northern churches, in secluded places, contain relics of Norman and early Gothic architecture; and here we found the pointed chancel arch with its flat mouldings, the cushioned capitals, and zigzag or flat toothed ornaments, carrying us back to the transitional period when the massive Norman was passing into the lighter early English style.

The party thence proceeded across Brankston ridge to Flodden Hill, and as we went along Mr. Jones pointed out the camp of the Scottish army, the route of the English army under Surrey, and the ground whereon the great struggle took place which decided the fate of the day. On the summit of the hill we found rampiers and ditches of an ancient Celtic camp, so that the Scots occupied ground, which had long before been fortified by another race.

From Flodden Hill the party hastened back to Ford in time for dinner, at which there were present—the President, Messrs. Langlands, Home, Dickson, M. Culley, Geo. Culley, F. R. Wilson, Wm. Boyd, Rea, Dand, Clay, Macbeath, Tate, the Rev. J. Dixon Clark, Thomas Knight, Delaval Knight, Green, John Baird, F. Simpson, W. Dodd; and as visitors, the Rev. Robert Jones, Mr. Jones, Mr. Carr, and Mr. Langlands.

After dinner, the members proposed at last meeting were elected, and Mr. Thomas Brodie of Ford, the Rev. John Irwin of Berwick, and Mr. John Liddell were respectively proposed and seconded.

Two papers were read, one from Mr. Embleton containing additions to the Zoology of Berwickshire, the other by the President on the long heel of the lark.

The Rev. Robert Jones of Brankston, was also elected a member; and, at the request of the club we hope to be favoured, by him, with a paper on the battle of Flodden Field.

Beautiful drawings of Saxon and Norman remains at Norham, executed by Mr. Grete, one of our members, were presented to the club by Mr. Home, and it was agreed they should be lithographed for our transactions."

Mr. F. R. Wilson's notes:—

"The parishes of Ford and Etal are especially rich in an

cient and modern works of architectural interest. They are moreover remarkable for the fate they shared before the memorable battle of Flodden, when King James IV. of Scotland laid siege to their castles and reduced them to ruins. Ford Castle, of which but three strong towers were left standing, was subsequently rebuilt and re-inhabited; but the Castle at Etal was then deserted and has remained so ever since.

Odinell de Ford, held Ford with other estates, as one knight's fee under the barony of Muschamp, in the reign of Hen. III. His daughter Mary married William Heron, Baron of Hadesdon, whose grandson, Sir William Heron obtained a license to crenellate Ford in 1339. The castle was still in the possession of the Heron Family when besieged and burnt by the Scottish King. Repairs must have been set on foot immediately after this catastrophe, for in a survey made in 1542, Ford is described as being partially restored. A century since, the present structure was erected, with all the faults of style the artists of that period perpetrated. Some of these, as for instance, the portcullis midway down the picture gallery, have been removed; but enough remains to show that the decorations were of an identical character to those lately displaced at Alnwick Castle. Two of the ancient towers mentioned as having survived the conflagration have been incorporated with the modern building. At the summit of one of them is a chamber traditionally supposed to have been occupied by King James on the eve preceding the fatal fight.

When we arrive at Ford, first we come upon the church, then the castle, and then the village. The whole scene is so pleasant to behold and so suggestive to think about, that we do not know which to admire most. The village so neatly trimmed, so green with its turf banks, so cheerful with its red pantiled cottages, might be in the centre of a gentleman's park instead of on the highway, all is in such careful order. The pretty post-office almost hid with climbing roses and evergreens, is at the end of the village; and on the day of the club meeting a most commodious school-house was in progress of erection to complete the picturesqueness of the place.

Time has dealt tenderly with Ford Church, and modern

days have used it well. The unusual-shaped gabled bell turret, with open arches for three bells, looks massy and grey over the tree tops, and tells us solemnly, "I've seen five hundred years pass by." Some parts of the edifice are not so ancient, but the additions have been made so judiciously that we cannot but approve and admire. There are north and south aisles to the nave, and an unusually long and fine chancel. The fenestration is beautifully managed; slender lancet windows light the aisles and west end of nave, all filled with memorial stained glass; while a large window of the decorated period of gothic art lights the east end. A most refined taste has presided over all the arrangements, which, either in detail or as a whole, are worthy of all praise. A mosaic reredos and the tessellated pavement of the chancel are both subsidiary in colour to the glowing hues of the stained glass; and the low-backed seats, pulpit, lectern furnished with its costly brass bound book of gospels, all unite in producing one uniform tone of fitness through the edifice. At the east end of the south aisle is a stone-coped tomb covering the remains of the late Lord Frederick Fitzclarence; and a white silk pall embroidered with a red cross covers the resting place of his daughter the late Miss Augusta Fitzclarence.

The remains of the Castle at Etal are considerable and of great archæological interest. The great entrance-gateway appears to have been of the same defensive form as the barbican existing at Alnwick Castle. An outer drawbridge conducted to an archway with a portcullis entering into a small open court-yard or trap surrounded by walls on four sides, from the top of which the garrison could assault the enemy. This portion of the barbican at Etal is demolished; the inner gateway-tower, however, remains, and though roofless and floorless is in good preservation. This part differs from the entrance-towers of Alnwick Castle, in having had a very handsome chamber immediately above the groined archway lighted by handsome mullioned and traceried windows: one of these exists in the west wall and a similar one in the east wall, together with a carved armorial panel.

The ruins of a colossal kind of keep tower exist, covered

with ivy, on the verge of a steep bank overlooking the river Till, in another part of the grounds north-west of the barbacan. This tower has been strongly groined on the ground-floor and has had several stories of rooms above. The fire-places pleasantly recessed, and traceried windows, and turreted staircases are remaining, and huge oak beams traversing not only the breadth of the rooms but passing superfluously through the whole of the very thick walls are still *in situ*, denoting the exact positions of the floors; and the whole of the arrangements are sufficiently complete and perfect to show that this portion of the castle has been occupied by no mean personages. At present whole colonies of pigeons and jackdaws, together with ivy and climbing boys combine most effectually to destroy these very interesting and instructive remains.

Etal was held by Robert de Manners as half a knight's fee, under the barony of Muschamp in the 13th of Hen. II., and continued to be so for some generations, by his descendants. Sir Robert Manners obtained a license to crenelate Etal in 1341 from Edward III.

Etal village is one wide street of thatched cottages, with well stocked gardens before each house, and climbing plants creeping up most of them and festooning under the eaves. The castle is situated at one end of the village: the hall at the other. The new chapel is built in the grounds of the hall in sight of the village. It is a mortuary chapel; and consists of a nave with south aisle and a chancel. The nave is fitted up with oaken benches for the accommodation of the villagers, while the aisle has been reserved for the use of the founder—Lady Frederick Fitzclarence. The chancel and sanctuary are richly decorated with gold and colour. The east end of the mortuary aisle is enriched with a circular window in the gable, filled with stained glass, executed by Messrs. Clayton & Bell of London, which casts rich tints upon the gaping vaults below. Seats in the porch invite the weary to rest before entering the sacred structure, and inner doors of light brass wire admit of the outer doors being left open for a free circulation of air without danger of desecration."

Mr. Wm. Dickson's notes :—

“ Other parties having described the battle-field of Flodden, where

“ Shivered was fair Scotia's spear
And shattered was her shield,”

Mr. Knight, Mr. Baird, and myself confined our walk to a visit to Etal.

The most attractive object is the Mortuary Chapel, a work of affection and piety.

The Right Hon. The Lady Augusta Fitzclarence of Etal and Clarendale, widow of the late Right Hon. Lord Frederick Fitzclarence, in the year 1859, built and endowed for the accommodation of a portion of the inhabitants of the parish of Ford, a chapel situate in the manor of Etal, in memory of her late husband and their only child, and which has been completed and consecrated by the name of “ *The Chapel of the Blessed Virgin Mary.*” The patronage is vested in Lady Augusta and her heirs. The chapel is about 80 feet long and seated for 80 persons, of which 40 are free. There is a south chapel adjoining the principal one, and which, in fact, forms part of it. The architecture both within and without is remarkable for its beauty and strict attention to details, the inside is rich, the walls smooth as velvet, and the roof radiant with gold and colours. This little chapel is situate near the public highway on the right hand side of the drive leading from the village to the hall.

The architect was William Rutherford of Adam Street, Adelphi, London. After taking leave of the chapel, we next proceeded a short way along the road northwards, and crossing a rich grassy pasture, towards the river Till, we entered the long drive made by the late Lord Frederick Fitzclarence along its banks, cut out of the slopes and through the woodland glades. The drive is continued a long way down the river, by the romantic rocks of Tipthoe and Tindal House, now called Clarence Dale.

As you enter the woods, and between the drive and the river, is the site of St. Mary's Chantry or Chapel. The foundations lie exposed, so that the site is well developed. There

are foot paths leading to it, and piety has placed a stone cross in the moss-grown chancel. Close adjoining to it, on the outside of the building, is a cool and copious spring called St. Mary's Well, and known by that name to the inhabitants long before these ruins were disinterred. Among those ancient records, the returns to the writs of *ad quod dampnum*, I am told, that this foundation is mentioned as the chantry of St. Mary, and that the jurors say that it would not be to the damage of our Lord the King, or any of his subjects if this chantry was to be founded. It has been of small dimensions—judging by the eye about 15ft. by 10ft. It is a curious place to fix upon, and I can hardly imagine it would have been so placed, unless to commemorate the spot where some celebrated warrior died, or where some devotee had escaped death, probably a watery grave, in the deep part of the river adjoining, called the pool; upon this, however, it is needless to speculate.

From thence we proceeded a little way along the walk through the woods by the side of the river, above the pool, admiring its sylvan beauties at every step. Our time was too limited to extend our walk to Tindal House and Tipthoe, where the scenery consists of high crags and scaurs; we returned by the river side and Etal Mill and so on to the old ruinous castle of Etal. The present state of the building shews it to have been a place of some importance in olden Border warfare.

The entrance to the castle is nearly entire, with its portcullis and warder's lodges on each side, and above the gateway are the arms of "Manners" on a stone shield with crest above it. The castle wall is entire along the south side; on the west side the wall is entirely removed, but the keep itself, on the north-west angle shews the height and accommodation it contained. The vault under the surface-level of the ground consisted of a vault with ribbed arch-roof; above have been four sets of floors, each now in their decay showing doorways, fire-places, hobs where beams have been inserted to support each floor, and there has been access to them by a circular stair, the ruins of which still exist. This interesting erection wants a little underbuilding to prevent the whole toppling down some day, and perhaps the present noble owner would

give directions. From the donjon-keep along the north and east sides as far as the entrance before-mentioned, the walls are gone, and the smooth cropped grass shews the castle-green.

Perhaps hereafter, the debris of the old walls under this turf may be removed and the turf relaid, as has been done at Warkworth with good effect.

This castle was built by Robert de Manners in the 15th year of King Edward III., as appears by the patent rolls, part 1. m. 15."

I regret that none of the excursions of the year have taken us within reach of Beanley and Titlington Hill. Had they done so, I would have brought under observation some instances of a very remarkable conformation of the moorland surface on certain declivities. The subsoil, consisting for the most part of drift, has been deeply furrowed into a series of nearly parallel channels, accompanied, perhaps, by some slight upgathering of the intervening ridges or balks. These last are often upon the scale of the old hedgemounds of the north of England, so that a man standing in the channel or furrow cannot see over the balks on either side of him; and sometimes this scale is much exceeded.

The whole is obviously the work of some ancient natural agency well worthy of our study.

The general course of this deep disturbance of the subsoil is down the slope of the hill, but subject to curvatures.

Although something is to be learnt from observing the manner in which our deeper deposits of peat are apt to open in fissures, which occasionally show a similar sort of parallelism; and more still from the small rain-channels formed upon the newly-made slopes of a railway-cutting; still objections, which appear insuperable, stand in the way, if we attempt to account for the phenomena in question, on the sole hypothesis of an extensive ancient development of peat; and especially, there is often no considerable thickness of vegetable soil, but rather a scantiness. Still less can rain, however abundant, have been the cause, through the formation of rain-channels in sinuous parallelism, is instructive. More so still are the small channels made on a steep slope of the sea-sands, when

the tide is ebbing, and the water left in a bank of shingle just above the slope, is finding its way out, by percolating through the sand. Here we have an accumulation above, of water sufficient to work an effect which mere rain from heaven could not accomplish.

I hope hereafter to have opportunities of putting the question to abler investigators than myself, whether an accumulation was not necessary on the lands above, before water, flowing down the slope, could produce such effects as we witness in the furrowing of various hill sides. But the conformation of the moorlands precludes all idea of a lake.

To the best of my judgment we are irresistibly led to the hypothesis of deep snow-fields, on the tablelands and heights immediately over the localities where the appearances are found; and of heavy snow-drifts, in places, which continued to discharge water copiously through long periods in summer; and all this pointing, probably, to a subarctic climate. The theory of morains is by no means applicable here. Provisionally, I would venture to call these excavations *Thaw-furrows*. Commencing gradually and upon a minute scale at first, all the features rapidly enlarge as they descend to a certain point, when they again diminish, either in magnitude or in regularity, or both; until they disappear on the lower skirts of the hill, or at its bottom.

From the aspect of the northerly slope of Simonside Hill, above Tosson, as seen from Snitter and Thropton, I believe there must be a very remarkable example of Thaw-furrows there. I have, indeed, for five or six years past, been in the habit of pointing out these striking appearances, nearer home, to my friends, and of trying to understand them. Nay, often have I spoken of reading some notices upon them before our club.

So long ago as the year 1830, certain deep parallel channels in the subsoil, in the upper part of Ravensworth Wood, struck me, covered as they were by trees, as being very singular and worthy of examination. They are on lofty ground, on the northern declivity of the fell near Pennyfine, with its extensive table-land, probably 700 feet above the sea. The plough and

pick-axe must have erased thousands of these channels on the skirts of all our higher valleys; let us study those where the heather, bent, and bracken have never been disturbed, while they yet remain to us.

Gentlemen, our club has added eleven members to its list since the last anniversary address was delivered; and we cannot wish better to those young members than that they may derive the pure and exhilarating refreshment of mind and body, which we have done, from the study of God's works in an inquiring but humble spirit; and from contemplating the remotely ancient as well as the mediæval works of the races of men who have peopled and enjoyed this fair and fertile land before us. The piety of some, and the patriotism of the rudest, may afford us useful lessons even now, if we do but read them.

One painful duty remains to be fulfilled by the President of the year, and one that I well know has been anticipated by the feelings and expectation of every member present. We have lately lost one of the oldest members of our circle, Mr. John Donaldson Selby, a member whom we all esteemed and valued, and to whom we have been indebted for the active support so important to such a society as ours. In our Secretary's own words, "Mr. Donaldson Selby was elected one of our members so long ago as May 6, 1835; he was President in 1848, when he gave the usual address; he contributed papers on meteorology in 1847 and 1848, and another on ancient buildings and on Saxon coins discovered on Holy Island in 1845." Thus, indeed, did our deceased and lamented friend stand true, even in his connection with our society, to the general character of his life,—that of a man always usefully and conscientiously employed and always in earnest.

CHIRNSIDE.

By JOHN STUART, F.S.A., Edinburgh.

Before the great start which agricultural improvement took in the Lothians in the early part of last century, there remained many evidences of early British possession which are not now to be seen. Of these the sepulchral cairns which seem to have been numerous in this district may be referred to. In the end of last century the vestige remained of a large cairn, which had stood on the eastern and highest summit of the hill upon the side of which the village of Chirnside stands, and two cairns were placed on Edington Hill, which, with a small interval, is a continuation of the same ridge. From one of these cairns a cist was taken and removed to a gentleman's place in the neighbourhood. It is recorded that near these cairns there might have been seen, till within the last 40 or 50 years, the remains of a British encampment.

From the most conspicuous cairn referred to, it is said that the parish takes its name. But, however this may be, we find very early notices of the district among the Coldingham charters, printed by Dr. Raine in the appendix of his valuable work on the history of North Durham. Under the name of a "mansio," Chirnside was given by King Edgar to the monks of Durham, and this suggests the thought that parishes had not as yet become one of the fixed institutions of Scotland, and also some of the circumstances from which these divisions took their origin. In the time of Bede, it is plain that the christianizing of the country was left mostly to the hands of the clergy in monasteries, who scattered themselves over the country, in various circuits, to perform the offices of religion, but returned to the monastery as head quarters. Still, the want of a permanent centre in the remote districts must have been severely felt, and in Bede's letter to Archbishop Egbert he urges him to ordain a number of priests who should visit every village preaching the word of God, consecrating the heavenly mysteries and administering the sacrament of baptism as often as possible. This arrangement would naturally soon be developed into a system of settled clergy, with certain districts allotted to their charge, and it appears from the enactments of a provincial council held in 747, that the collegiate and conventual bodies had been induced to erect on their lands churches which were served by priests under the superiors of those bodies, and that moreover the lands of the lay proprietors

had been divided into districts by the bishops, and committed by them to the pastoral care of certain priests*. It was not long before the existence of a church on the lands of a proprietor became a necessary qualification for elevation to the rank of thane†. The rights which ensued on the apportionment of districts or parishes to a separate priest, were soon recognized and enforced, for we find among the Anglo-Saxon Ecclesiastical Institutes an injunction, that no mass priest should entice any man from the parish of another church to his church, nor instruct any one from another priest's district to attend his church, and give him their tithe and the dues which they ought to give to the other‡. In Ireland the monastic system prevailed till the twelfth century, when, for the first time, the division of the country into ecclesiastical districts took place. It is probable that the monastic system prevailed longer in Scotland than it did in England. We find, however, cases of parochial arrangements in the time of David I., as in that of Eccles where the rights of the parish church in the matter of teinds and its cemetery are recognized.||

An instructive example of the origin of a parish is afforded by a deed of Thor Longus, one of the followers of King Edgar, from whom he had received Ednaham—a desert. Which desert, he goes on to say, he had cultivated and peopled, and raised a church from the foundation in honour of St. Cuthbert, and which church with one carrucate of land he now bestows on the monks of St. Cuthbert§. This accounts for the parish of Ednam in Roxburghshire, which probably coincides in extent with the land originally granted by King Edgar to Thor Longus.

The names of several parishes in Scotland are derived from the early holders of the manors. Thus, Wiston in Lanarkshire is the town of Wice or Withice, whose grant to the monks of Kelso of the church of his town or manor was confirmed by King Malcolm the maiden, in 1159. The adjoining parish of Symington is the town of Simon Locchard, and “the church of Symon Loccard's town” was also confirmed to the monks of Kelso by the same monarch between the years 1189 and 1199. Thankerton is the town of Thomas Tancard, as Covington probably is the “villa Colbani”—one of the followers of St. David.

* Lingard's Hist. and Antiquities of the Anglo Saxon Church, Vol. I. p.p. 157-8. London, 1845.

† Ib. p. 159.

‡ Thorpe's Ancient Laws and Institutes of England, Vol. II. p. 411.

|| Acts of the Parliaments of Scotland, Vol. I. p. 47.

§ North Durham Appendix, p. 38.

In the same way in England, we read in "Notices of the Domesday Book for Wiltshire" that "some of the parishes of the country of which there are more than one of the same name, owe their distinctive appellation to the proprietor of the manor recorded in the Domesday Book; thus there are two parishes of Fonthill, the one known as Fonthill Bishops, and the other Fonthill Giffards. Now in Domesday we have two manors of the same name, one of which was held by the Bishop of Winchester, who is still the patron of the living, and the other by Berenger Gifard. Again there are two parishes of Cannings Bishops and All-Cannings; and in the Domesday Book there are two manors called Caninge, one of which was held by the Bishop of Winchester, and the other by the nuns of Winchester." The same writer remarks "The greater portion of the present parishes of the county derive their names from the ancient manors mentioned in Domesday; but in several instances the manors have become divided for parochial purposes, when only one division has retained the manorial appellation, whilst in other instances several parishes comprise two or more of the ancient manors*," and a careful examination of the Domesday Book for Hampshire and Wiltshire, did not furnish this writer with a single mention of the word "parish" or any expression which would lead him to suppose that such a division then existed. "The churches which are mentioned, most of which I doubt not are the present parish churches, are in Domesday spoken of as belonging to the several manors in which they were situated."

What is precisely meant by the word "mansio" it may be difficult to determine, but it seems to denote a district with a settlement in it and to be equivalent to a manor. The erection of a church in the "mansio" of Chirnside, which probably followed at no distant period after the grant of it, would soon confer parochial rights and require parochial boundaries. It has been remarked in Sir John Sinclair's statistical account of the parish of Chirnside† that, "before the barony of Chirnside was divided among the heritors in consequence of a decree pronounced by the Court of Session in 1740, it is to be observed that there were no outfield farms, excepting those belonging to the three mills in the parish. The village, like others in the country, comprehended all the houses and cottages appertaining to the several proprietors, great and small. Adjacent to the mansion house of some of the farms, there was what was called the mains farms, or that of his domain

* Proceedings of the Archæological Institute at Salisbury, 1849, p.p. 177-8.

† Statistical Account, Vol. XIV. p. 47. Edinburgh, 1795.

or household. Hence, as the land was in time parcelled out into several farms, so, many of them, distinguished only by their position in different quarters, are known here and in other parishes by the common designation of *maines*." This last word may be the modern rendering of the word "*mansio*," so that at the date of Edgar's grant, there may have only been one prominent and central settlement in the district contained in the grant, and from which it was designated*. Part of the ancient church may yet be traced in the present parish kirk, the western doorway of which is in the Norman style.

The manor was held of the monks of Coldingham during the 12th and 13th centuries, by the Earls of Dunbar. It afterwards formed part of the Home property, but now belongs to Sir — Hall.

In the church is a square tablet bearing the date 1572, on which are carved the words "*Helpe the Pvr.*" Like many Border churches, that of Chirnside had formerly a defensive tower erected near its west end. Its roof was vaulted, in which respect it differed from others in the district, which seem to have been thatched, till nearly the end of last century; near the western door hang a few links of the chain to which the jugs had in old times been attached.

In the ancient *taxatio* of the churches in the See of St. Andrews, *Ecclesia de Chirnesyd* is taxed at 50 merks; and in Bagimonts roll, *rectoria de Chirnside* is assessed at £4.

In the volume printed by Dr. Raine for the Surtees' Society, illustrative of the history of Coldingham, there are preserved some curious records of the properties of the monks of Coldingham, illustrative of the early social condition of this part of the country. It is entitled "*Rentale Antiquum de redditibus Tenementis &c., in Scotia*," and among other rentals it preserves to us that of Fyschewike which was one of the "*mansiones*" included in the gift of King Edgar to the monks of Durham. This "*mansio*" was originally a parish by itself adjoining to Chirnside, but in 1614 it was united to the parish of Hutton. It has been remarked that "in this district the parishes must have been originally very small, as most of the present ones formed two, and still are by no means large either in extent or population†."

I venture to give a translation of the rental of Fishwick, as very curious and suggestive of what was the condition of

* This seems to agree with the statement in Sir Henry Ellis' *Dissertations on Domesday voce* "*mansio*." See also Ducange *Glossarium voce* "*mansio*" quoting Bracton.

† New Statistical Account, Vol. II. p. 150. Edinburgh, 1845.

Chirnside and the neighbouring country, at least of those parts of their property which were in the improving hands of the monks themselves.

The chief messuage with garden and pigeon house is worth 6s. 8d. in the year. There are likewise in demaine two ploughlands, whence eight oxgangs go to a ploughland, and twelve and a half acres make an oxgang, and every oxgang is worth in the year five shillings. A meadow of $2\frac{1}{2}$ acres can be scythed for two years but not the third, and the acre is worth 12 pence. An enclosed pasture of about 50 acres, is worth 40s. There was a mill but now there is none; if it should be restored it would be worth 7 marks in the year. Two fishings are worth in the year 13 marks; also one fishing which is called North Ford, returns yearly one mark, and is let to a tenant.

The advocation of the church is not entered because it is in our own hands.

There are 16 husbandi viz., William the son of Robert who holds one toft and 30 acres of land with pertinents of his moor, and returns yearly 6s. 11d. And every one who has a ploughland, ought to plough and harrow one acre and to get food once in the day with four companions; and he shall have three dishes, and cheese and sufficient drink; he shall reap for two days in the week with two in the day, and shall receive two ploughman's loaves, three herrings, and cheese, and all the bonds and cottars shall have on every day when they work in the manor, one stone of cheese. All the other bonds equally hold, and equally do and receive. And all shall carry the lord's corn, dig turf for one day, rake for one day, and every one shall carry six cart loads of turf and have food once in the day. They shall carry the lord's food, the teinds and corn of Berewyk, and shall have two loaves. All shall wash and shear two flocks of sheep of the second year, and shall have food once, viz., every one two loaves, three herrings, and cheese. And all of them shall give suit multure, twelve of them paying for multure 3s. each, and of the other four, one three shillings and one two shillings.

There are six cottars; each one holds a toft and six acres of land, of whom Robert the son of Henry returns annually for his land 12d., and mows two days in each week with one man; and he shall have food once in the day, viz., two loaves and three herrings; he shall gather the corn and have his food twice in the day, and at noon shall eat in the hall, in the time when the subject is let. But if the prior shall have the manor in his own hands, he shall have two loaves and

three herrings and cheese. Also the said Robert shall dig turf for one day and have once in the day; and when the bonds carry turfs, the said Robert shall build them and have one meal in the day; he shall drive the sheep to water, and those destrained to be shorn, and have two loaves and three herrings. All the other cottars shall do the same as Robert in all points, they shall rake as the bonds and have one meal in the day.

One toft with a garden belongs to the brewhouse; it is worth and returns one mark yearly.

Tenants. There are there five tenants of whom each pays 12d. in the year, and digs turf one day, rakes one day, reaps four days, and when reaping has two meals in the day.

William the weaver has one toft with a garden, and pays by the year, 2s., and works at the mill dam. All in the village shall work at the mill dam, and build the miller's house at their own charges, and the Prior shall supply timber in gross, and they shall carry it. One toft with a garden lies waste, which used to pay by the year 26d.; it is now let for one year at 4d.

It is to be remembered that one fishing is let, in a place called Schipwell at the bridge of Berewyk, and returns by the year, half a mark. The sum of the whole with the fishings is £21 6s. 4d. besides the mill.

The rental of the other lands of the Prior give some varieties in the tenures, in the size and value of the oxgangs, and many suggestive particulars of the condition of the country at a very early period.

A FEW NOTES ABOUT HUTTON HALL, BERWICKSHIRE.

By CHARLES STUART, M.D.

Hutton Hall is situated on the south bank of the Whitadder, about eight miles from Berwick-upon-Tweed, and one mile to the west of the village of Hutton. Perched on the top of a steep bank, with a beautiful green haugh between it and the river, the situation is very fine. The trees in the park, immediately in front, are of great age, and completely hide the old battered pile from observation till the visitor is close upon it. The view looking down the river, combines the charms of wood and water, while the beautiful banks of Whitehall

(another old deserted house) add a richness to the landscape. After passing through the richly cultivated country around, the deserted and ruinous mansion of Hutton Hall takes the visitor by surprise, recalling to the mind the memories of the past.

The ancient tower was situated a little to the west of the present building, and, from its position, was evidently a place of great strength. The date of the newer part is 1573, as was seen till very lately over the door. The square massive tower seems to be the only part of the ancient castle not destroyed, and was evidently constructed to resist the hostile visits of "the Northumbrian prickers wild and rude."

There can be no doubt of the existence of this part of the building for at least three centuries. The newer part is in the Elizabethan style of architecture, with less of the ornamental than we usually see in houses of the same class further south. The intricate passages, winding stairs, and concealments speak of a very early period, when the arts of peace were less practised than at present, and when it was necessary to provide against the consequences of a midnight surprise, by the possession of a means of escape after the usual hostile measures had failed.

It is a very difficult matter to discover much about the early history of a place like the present. I think, however, we cannot be far wrong in supposing Hutton Hall to have been, originally, the residence of the Huttons of that ilk, more than once mentioned in Nisbet's *Heraldry*. They appear to have early left the county, but are still extant, and boast of their family having produced some eminent men. Dr. Thomas Hutton, Richard the third's ambassador to the court of Brittany, was one; Dr. John Hutton, chief physician to William and Mary, was another; Dr. James Hutton of Slighouses, author of an ingenious treatise on the earth, and who also introduced turnip husbandry from Norfolk into Berwickshire, was a third.

But whatever may have been the origin of Hutton Hall, it appears by a charter dated 1st July, 1467, and quoted by Sir Robert Douglas in his *peerage of Scotland*, that George Kerr of Samuelton, at that date conveyed the lands of Hutton Hall to Sir Alex. Home of that ilk, and that it subsequently became the property of one of the seven spears of Wedderburne, mentioned in the *Lay of the Last Minstrel* by Sir W. Scott, as having come to the aid of Branksome, against Belted Will Howard and Lord Dacre. The seven spears of Wedderburne were the sons of that Knight of Wedderburne who fell at

Flodden. 1, George who shared his father's fate; 2, David who succeeded and killed the Count de la Beauté, Warden of the Marches, commonly called Bawtie; 3, Alex. Home of Manderston; 4, John Home, who married the heiress of Blackadder of that ilk; 5, Andrew Home, Abbot of Dryburgh; 6, Patrick Home of Broomhouse; and 7, John Home, who married the second daughter of Blackadder of that ilk, and possessed Rowanston. It seems, so far as it can be made out, that Alexander Home of Manderston, the third spear, became owner of Hutton Hall, and his arms appear in a stone over the door.

Meanwhile Hutton Hall had undergone some rough treatment. In 1496, when James the fourth had espoused the cause of Perkin Warbeck, given that pretender the hand of the beautiful Lady Katherine Gordon, and invaded England to place Perkin on the throne, Henry VII. in retaliation sent the Earl of Surrey with an army over the Border; and Surrey, advancing into Berwickshire, took the castle of Ayton, and among other strongholds threw down Hutton Hall. Ford, in his dramatic chronicle of Perkin Warbeck, makes the most of this inroad, as Sir W. Scott remarks in a note to *Marmion*, when making Surrey say of the Scots—"Can they look on the strength of Cunderstine defac't, the glory of Haydon Hall devastated, that of Edington cast down, the pile of Foulden overthrown, and the strongest of their forts—old Ayton Castle—yielded and demolished and yet not peep abroad."

It is not exactly known when the estate of Hutton Hall became the seat of the Johnstons of Hilton. However, it appears that the first Johnston of Hilton was Archibald, a cadet of Johnston of Benholm, in Annandale, who was a merchant in Edinburgh about the beginning of the 17th century, and bought Hilton from Sir Alexander Swinton of Swinton. After intermarrying with the Homes of Polwarth, and the Winrams of Liberton, the Johnstons of Hilton came to be represented by two brothers; 1st, Joseph Johnston of Hilton, who is said to have been killed by William Home, sheriff of the Merse, at the Hirsell, of whom more hereafter; 2nd, Sir Patrick Johnston Lord Provost of Edinburgh, representative of that city in the last Scotch parliament. The last of Joseph Johnston's male representatives was Colonel Robert Johnston of Hutton Hall, who died at Ripon, in 1848. The last of the male line was Lieut. Col. Frederick Johnston, who for some years lived at the Albany.

It does seem strange that in a country where there necessarily must have been so many rough encounters, and so

much that is historically interesting, so little is preserved in the traditions of the people. The manners and customs of the inhabitants have changed so much that, owing to their peaceful employment, they have really no relish whatever for information of this nature. Of the times that the Homes were owners of Hutton Hall, there is no record preserved, but of their successors, the Johnstons, there are two interesting stories.

Joseph Johnston, the son of Archibald, the first of Hutton Hall, flourished during the reigns of Charles the second and James the second, and during that time Daniel Douglas was minister of Hilton, a man whose memory is still preserved among the people, as a staunch presbyterian. His zeal at this time got him into trouble. The people had assembled in Hilton kirk, the ruins of which still exist, and among others Joseph Johnston. Douglas, in his sermon, said something which gave offence to the laird, who rushed upon Douglas in the pulpit with his drawn sword, and wounded him. Indignantly addressing Johnston, he prophesied against him the prophecy of Elijah against Ahab,—“In the place where thou hast done this shall dogs lick thy blood.”

Douglas, compelled by the troublous times, sought refuge in Holland. Some time after these events, Johnston and Home of Ninewells, were invited by the Countess of Home to the Hirsel at the merry Christmas times. The Earl of Home was detained in London on state business, and was in consequence not present.

One evening Home of Ninewells, and Johnston of Hilton were playing cards with William Home, sheriff of the Merse, and the latter having lost a large sum of money, was not, when they parted for the night, in the most amiable frame of mind. Johnston, indeed, had just retired to bed, when the sheriff bursting into his room with a lighted candle in the one hand and a drawn sword in the other, demanded satisfaction. As Hilton was rising from his bed, Home ran him through the body and inflicted several most severe wounds; Ninewells, who hearing the fracas, and in the act of coming to see what was the matter, was also stabbed and expired on the spot. The murderer instantly fled; Johnston lingered for a few days and expired. His remains were put in a coffin and taken to Hutton Hall: but on the way, the persons who were conveying the body were caught in a severe snow storm at Hilton, and had to wait some time till the storm passed by. For the sake of decency, the coffin was carried to the church, where it was deposited. It was then observed that

blood was flowing from the coffin, and before it could be prevented, the dogs accompanying them rushed forward and fulfilled the prophecy of Daniel Douglas.

Popular tradition is all the authority I have to offer for the latter part of the story, but the Hirsell transaction is fully detailed in a letter written at that period by the steward of Lord Derwentwater to his Lordship in London, and is also related in "Law's Memorials." In a note appended to that narration, Law states "Before his death, Mr. Home is said to have returned to Scotland, smitten with remorse, and anxious to obtain pardon from a near relation of Johnston, then residing in Edinburgh. This gentleman, in the dusk of the evening, was called forth to the outside stairs of the house, to speak to a person muffled up in a cloak. As he proceeded along the passage, the door being open, he recognised the murderer, and immediately drawing his sword rushed towards him, on which the other leaped nimbly down from the stairs into the street and was never again seen in Scotland." Lord Fountainhall states that the unhappy man was killed in the wars abroad. His name has been omitted in the account of his family in the peerage.

The sisters of the late proprietor of Hutton Hall, Colonel Johnston, were among the most beautiful women of their day. There were four,—one was Mrs. Oswald of Auchencruive, whose portrait by Raeburn is one of his finest masterpieces, and the engraving of which, in Blackie's edition of the works of Robert Burns, has rendered her face not unfamiliar. "Wat ye wha's in yon toun" was written in her praise by the Scottish Bard. A distinguished equestrian, she was a zealous fox-hunter, and withal one of the most graceful, accomplished, and beautiful women of her time. Lady Baird of Saughton, was another sister.

Some other stories about this old place might still be got together, but I am afraid I have already wearied you with what I have read. The popularity of the Johnstons is greater than could be credited, attaching as it does to a family who have left the country for nearly thirty years.

The present proprietor is Mr. M'Kenzie Grieses, who resides constantly in Paris.

SAINT BATHAN.

By JOHN TURNBULL of Abbey St. Bathans.

28th June, 1860.

It has been suggested that at the visit of the club to the parish of Abbey St. Bathans to-day, some account should be given them of the "misty saint" whose name the parish bears, and I have accordingly put together the following desultory notes regarding him.

The name appears in many different shapes—Baithen, Baithin, Baithan, Baetin—are some of the earlier forms. Boythan, Bothan, Bathan, are later forms, besides which there are many other spellings, and the word sometimes has and sometimes has not a Latin termination. There have been several saints of this name, one or other of whom has given it to two parishes in Scotland, namely, Abbey St. Bathans, where we are now met, and Yester or Gifford in East Lothian, which was formerly called St. Bothans. The prefix "Abbey" in the case of this parish, probably arose from the religious house which was established here.

The particular saint from whom this parish derived its name was Baithen, son of Brendan, and successor of Columba as Abbot of Iona. The authority for this is Dempster's *Mnologium*, under 19th January. "*In Lamermure Bothani Episcopi et cænobii sanctimonialium ei consecratio B. sutrii Die Coll abatis, qui sancto Columbano successit, sed non Robiensi P.*" This statement is so distinct that an inaccuracy in the date under which it is entered cannot affect it. As will afterwards appear, the festival day of this Baithen was the 9th June not the 19th January, which latter date is the festival of another Baithen called Baitan Mor, who also was a contemporary of Columba, but not his successor at Iona. He became Bishop of Clonmænois in Ireland.^a

Prior to the tenth century the history of Scotland is little to be depended on, but in the midst of the uncertainty, one group, composed of Columba and his disciples, rises in somewhat misty outline indeed, but more clearly seen than any other human forms against the hazy distance of mystery and obscurity, being the only persons in that age of whom biographies, written at no distant period after they lived, have

^a This Baitan Mor was the author of a life of Columba in Irish metre, sometimes erroneously attributed to Baithen son of Brendan, as in Jameson's *History of the Culdees*, p. 311. He was also the author of several other works.

come down to us. Written, however, as these biographies were, for a rude and superstitious people, the authors of them have narrated rather the marvels than the sober realities of their subjects, and have striven more to excite the admiration of their contemporaries, than to meet the stern requirements of a future age for historical accuracy.

Baithen was the son of Brendan, the son of Fergus, the son of Conal Gulban, the son of Niall of the nine hostages.^a He was born in Ireland, (then called Scotia,) according to Tighernac in the year 536. He seems also to have been named Conin^b or Cominus,^c though it may not be altogether free from doubt whether Conin was not his brother.^d He had a brother named Cobthach^e of whom little more is known except that he was one of Columba's followers to Iona. That he became no way famous, appears from an ancient Irish poem which says :—

“ Brennan of happy career left none
Save Baoithan of goodly deeds.”^f

Brenden (father of Baithen) was brother of Fedhlimidh who was father of St. Columba, and therefore Columba and Baithen were cousins german. Through their fathers they were of the Royal race of the northern HyNeill or reigning family of Ireland. Columba, however, was 15 or 16 years older than Baithen, having been born in 520 or 521. From his infancy Columba felt a strong affection for Baithen, and brought him up and educated him.^g “Reverendus pater Abbas Baithi-
“nus ab infantia sua in verbo Dei et discipuli (moribus) ab
“abbate præclarissimo Columba diligenter instructus est” and hence Baithen is frequently mentioned as the “Alumnus” of Columba. Notker calls him “familiarissimus discipulus.”^h Baithen repaid this kindness of Columba by becoming his most devoted follower and zealous friend. For the first 27 years of his life, however, there is no history of him extant. It was when Baithen had attained this age (A. D. 563) that Columba left his native land and devoted himself to the conversion of the heathen population in Scotland. Like his great master, he went accompanied by twelve disciples, whose names have all been preserved, and first on that list of noble men is

a Ordnance survey of Londonderry.

b Adamnan's life of Columba, edited by Reeves, p. 245.

c Acta Sanctorum.

d Boece Lib. 9, fol. 166, § 70. Ussheri primor.

e Adam. p. 245.

f Reeves's Adam. p. 245.

g Acta S.S.

h Ussheri primor, p. 701.

Baithen, a worthy follower of him who in Iona planted the cross and founded that glorious college, from which Scotland was both to be christianised and civilised. "Hæc sunt "duodecim virorum nomina qui cum sancto Columba de "Scotia primo ejus transitu ad Brittanniam transnavigaverunt: "duo filii Brenden Baithene qui et Conin, sancti successor "Columbae, et Cobthach frater ejus; Ernaan sancti avunculus "Columbae" &c.^a Boethius describes them as "Christi dogmate insigniter imbuti, sed magis longe sanctissimis decorati moribus."^b

From the energy of his character we may well believe that Baithen took his full share of the labour necessary to establish the monastery, and when it was finished he devoted himself to missionary labours abroad, and to writing, teaching, and agriculture at home.

Chief among his home duties was that of transcribing the scriptures, a work continually required by Columba of his disciples, and in which he was at much pains that they should be perfectly accurate. Baithen must have excelled all his companions in this art, for it is recorded of him "Quadam "die Baitheneus ad sanctum accedens, ait, necesse habeo ut "aliquis de fratribus mecum Psalterium quod scripsi percurrens, emendet. Quo audito sanctus sic profatur, Cur hanc "super nos infers sine causa, molestiam? nam in tuo hoc, de "quo dicis, Psalterio, nec una superflua reperietur litera, nec "alia deesse, excepta I vocali, quæ sola deest. Et sic toto "perlecto Psalterio, sicuti sanctus prædixerat repertum, exploratus est."^c Sir Walter Scott, therefore, has done this saint a grievous injustice in making him the patron of ignorance in the art of writing, when he makes the old Earl of Angus exclaim

"Thanks to St. Bothan, son of mine
Save Gawin ne'er could pen a line."^d

Among secular duties, agriculture principally engaged our saint, and we read of his performing the several operations of husbandry with his own hands, and earning his bread by the sweat of his brow. It was harvest; the brethren were engaged in reaping and carrying home their crop; Baithen being "dispensator" or steward. The air became filled with a heavenly fragrance as if all the flowers in the world were

^a S. Columbae Discipuli et Cognati. Reeves p. 245. Fordoun Scotie. 26. Ussheri prim. p. 694.

^b Boece, fol. 166, § 70.

^c Adam. i. 23. Colgan, cap. 23.

^d Marmion.

collected together, inspiring in the hearts of the labourers a heavenly and unwonted joy, banishing all sensation of fatigue or sadness, and so lightening their burdens that they did not feel the weight of the corn they carried on their backs from the field to the Monastery. Baithen being enquired at, explained that Columba ever mindful of them, though not bodily present, still in spirit was assisting them and gladdening their hearts, upon which all kneeled down, stretched out their hands to heaven and worshipped—"Christum in sancto venerantur, et beato viro."^a

While superior of the monastery of Nah Lunge, in *Ethica Insula*, (Tiree,) he also had superintendence of the farm there, from which the establishment at Iona derived a great part of its supplies: and we find on one occasion, Columba giving an order to him to send a fat wether and six measures of corn to a thief, who had, by supernatural information furnished to Columba, been once caught in Iona, and who now was in a vision, perceived by the saint to be dying. The presents, however, did not arrive till after he was dead, but served for his funeral feast.^b

Baithen, however, did not remain long in Iona, but was employed in various missionary expeditions, sometimes alone, sometimes in company with Columba himself, and sometimes with other monks.

While he was on one of these expeditions to "*Egea Insula*" (the island of Eigg), "the saint" (Columba) who was then in *Hinba*, (an island which seems to have been situated to the north of Iona, but cannot be identified), fell into a glorious trance, and while he would allow no one to approach him, he complained continually that Baithen was not present with him. Contrary winds, however, prevented Baithen's arrival for the three days during which the trance lasted, and the old chronicler laments the loss by this detention, of the information regarding past or even future ages, which he assumes would have been communicated to our saint.^c On another occasion we find Baithen in this same island of *Hinba*, along with Columba, rebuking a penitent there named *Nemanus*, who refused when ordered to accept food that was offered him. The holy man prophesied that he should be reduced to eat mare's flesh in the company of thieves, and it came even as they had spoken.^d On another occasion we read of him sitting

^a Adam. i. 37.

^b Adam. i. 42.

^c Adam. iii. 18.

^d Adam. i. 21.

in judgment along with Columba on a man who "*fratricidium in modum perpetravit Cain, et cum sua matre mæchatus est.*" The saints dismissed him with the advice that if he was truly penitent and remained among the Brittones, without returning to Scotia (Ireland) during his life, perhaps God would forgive him. It is added, somewhat illogically, that it happened as the saints had foretold, for he went to Ireland and was murdered.^a

Having been sent by Columba to a place called Druym-Cuill, to excommunicate an impenitent family there, he transferred the punishment from the family to a tree under which he rested, and in a few days fire fell from heaven, the tree was rent to the very root, and died as the man of God had spoken.^b

Returning from these wanderings Baithen went to Tiree and presided over the monastery of Nagh Lunge in that island. Besides it there were several other institutions in the island, all dependent on Iona; but this monastery was a college or training school for missionaries, and there is one instance recorded of "*Sapiens vir Feachnaus qui in quodam facinore lapsus,*" but who had become penitent, being sent there, apparently to be confirmed in the faith by Baithen.^c Baithen's appointment to superintend this institution, is a powerful testimony to his talents, learning, and zeal. While he was here, the island was visited by a fearful disease, caused, it is said, by an attack of demons. Baithen, by fasting and prayer, so saved his monastery that only one person died, whereas in the other monasteries of the island many were cut off.^d Nor was this the only occasion on which Baithen put the devil to flight. In this same monastery of Naglunga, one of the brethren was vexed with a devil which Baithen cast out saying, "*Thou knowest, O devil, that as there has never been friendship between me and thee, so there never shall be; wherefore I command thee in the name of Jesus that thou depart out of my borders.*"^e The devil fled accordingly and the brother was saved. It was mostly, however, after he became Abbot that he exercised power over devils, and several instances are recorded. One of his own monks who was so vexed with a devil that, unless bound with iron chains, he tore himself and all around him, Baithen for very modesty

^a Adam. i. 22. Colgan cap. xxii.

^b Acta S. S.

^c Adam. i. 30.

^d Adam. iii. 8.

^e Acta S. S.

refused to cure, but sent him to Ireland for the benefit of the prayers of the saints there. After a long time, however, the maniac returned, and Baithen commiserating him offered a sacrifice to God in the church before the brethren, and then cast out the devil through the same eruption on the patient's chin by which he had entered him.^a It was soon after he succeeded Columba that, while sitting at dinner, he saw a horrible devil looking in through the window, and immediately he made the sign of the cross towards the brethren, and the devil, like smoke, vanished away. Being enquired at why he had made the sign of the cross, he told them that the devil had been looking in at the window, to discover whether any of them neglected to ask a blessing from God before his food, or to return thanks after it, but that on being observed, he was overcome by the sign of the cross and "ut vapor evanuit."^b

From the island of Tiree Baithen made occasional visits to Iona, and it may well be imagined that in the frail coracle of those days, a voyage along that coast, exposed as it is to the swell of the broad Atlantic, was attended with much danger. Columba, however, by supernatural power, sometimes so ruled the winds as to make them favourable for the voyages of his disciples, in the same day giving Baithen one wind and Columbanus another, as each required for his particular voyage.^c It was not, however, danger from the elements alone that the heroic saint was called on to meet. "A huge sea monster," said Columba to Baithen as he was embarking on one of these voyages, "rose from the sea last night, and may meet you to-day between Iona and Tiree." Baithen replied "I and the beast are both in the hands of God." "Go in peace," said the holy man, "thy faith will protect thee from this danger." He sailed accordingly, but in the voyage saw the dreadful monster. He alone of all in the boat being without fear, raised both his hands and blessed the creature, upon which it sunk under the waves and was seen no more.^d

At length the time came that Columba should die. The account given of his death by Adamnan is most touchingly beautiful, but is too long to be quoted here. He had long looked to Baithen as his successor, and in a poem which he wrote only six days before his death, and which is called "Columba's Intoxication," that is, prophetic inspiration, he frequently mentions Baithen. The first line of it is—

^a Acta S. S.

^b Acta S. S.

^c Adam. II. 15.

^d Adam. I. 19. Colgan cap. xix.

"Listen to me O good Baithen"

and towards the end occur these stanzas—

"Mandar of the great ships shall come
And shall carry off my body from my people,
It was the Tailgum that foretold this,
O beloved Baithen put on record.

Patrick foretold of a truth,
And Bridget the evil deedless foretold
That their bodies shall be in stainless Dun
And my body O Baithen record."^a

On the day on which he died, Columba had been transcribing the psalms, and at the foot of a page had written that verse of (Adamnan says) the 33rd psalm. "Inquirentes autem Dominum non deficient omni bono." This is in reality the 34th psalm and 10th verse, "they that seek the Lord shall not want any good thing." "Here," he said, "I must stop at the bottom of the page, what follows let Baithen write."^b "That" says Adamnan "may well be the last verse Columba wrote, for he will not want any good thing for ever." And the next verse suited well Baithen. "Come ye children hearken unto me, I will teach you the fear of the Lord." The same night Columba attended the nocturnal vigil, and just after midnight, between Saturday the 8th and Sunday the 9th of June, in the year 597, while on his knees at the altar, without ache or struggle, his spirit gently took its flight.

"Thirty years without dispute was
Columba in his dark church,
He passed with angels out of the body
After seven years and seventy."^c

He was succeeded as Abbot of Iona by Baithen, whom he had himself nominated to that office.^d A worthy successor he proved to the great apostle of Scotland, and attracted followers from Ireland and elsewhere. St. Fintan in his youth entertained a strong desire to go from Ireland to Iona, and become a disciple of Columba. On the propriety of doing so, he consulted a priest, prudent and respected in his generation, named Columb Crag. While he was with him there arrived at Columb Crag's monastery two monks of Iona. "Columba, your holy father, is he well?" says Columb Crag. The monks bursting into tears answered "He is indeed well, our father, for he has lately gone to Christ," whereupon all present wept

^a Reeves's Preface, p. 80.

^b Acta S. S. Adam III. 25.

^c Tighernac. Iona Club Trans. p. 217. A somewhat different version is given in Reeves's Adam, p. 277.

^d Adam. I. 2.

bitterly. Fintan then asked "whom has he left as his successor." "Baithen," they say, "his pupil," and all exclaimed "He is worthy!" Columba Crag then asked Fintan what he now meant to do, who replied "If the Lord will permit, I will cross the sea to Baithen that holy and wise man, and will have him for my Abbot." He accordingly went to Iona and presented himself to Baithen. "I ought to thank God for your arrival, my son," said Baithen, "but know of a truth that our monk you cannot be." Fintan in sadness remarked that perhaps he was unworthy; "Not that you are unworthy," said Baithen, "I would willingly retain you beside me, but I cannot disobey the order of holy Columba, my predecessor, through whom the holy spirit has prophesied concerning you," and then he tells him how Columba had foretold that he would come from Ireland to Iona, but that he was not to be allowed to remain there and become the monk of any Abbot, for that he had been chosen of God to be an Abbot of monks and a leader of souls to the heavenly kingdom. Fintan accordingly, having received the blessing of Baithen, returned to Ireland and became "per universos Scotorum Ecclesias valde noscibilis."^a

The acts recorded of Baithen, after he became Abbot, in the *Acta Sanctorum*, are all of them to some extent miraculous. We find him curing a monk, Trenanus, of dropsy, and modestly commanding him to tell no one by whom the cure was effected, but prophesying at the same time the period of its return. His cloak having been lent to a monk who was going on a journey, had virtue sufficient to cast out a devil. A dog biting his staff, which had been lent to Lugbeus, dropped dead. Iron weapons blessed by him^b ceased to wound. He himself having been insulted by Beoanus, sent him some milk in a vessel, which being swallowed caused a disease, of which Beoanus died, but happily "in contritione bona."^c

The time at last came when Baithen too should die. It was just three years after his succession as Abbot, that he was in the church of Iona, before the altar praying to God, when a sleep as of death came upon him; and when the brethren crowding around him were lamenting, Diormit, who had been the faithful servant of Columba, said "Behold, brethren, you see that there will be no great interval between the two festivals of your superiors." On these words being uttered

^a Adam i. 2.

^b Similar miracles are attributed to Columba. Adam. ii. 29.

^c Acta S. S.

Baithen aroused from his deep sleep said "If I have found "grace in the eyes of God, and have up to this day finished "a perfect course in his sight, I trust in him that I shall not "die till the festival day of my senior, which is still six days "distant."^a It was as he said. He had found the grace he sought; he lived the six days and died, aged 66, on the 9th of June, in the year 600, the same day of the month as Columba and three years after him. Hence, St. Columba's and St. Baithen's festival days are the same. This is referred to in an ancient poem preserved in M.S. at Brussels—

"Columcille,—beautiful his aspect
And his comrade Baithene;
Their Festivals perpetually without change
Upon the same day of the week (month).
They were as one,—behold this interval;
Four years—it not untrue—
Baithene was later on earth
Colum was the first in Paradise."^b

and again in another poem—

"They went into the eternal kingdom
Into eternal life of brightest splendour;
Baithine the noble the angelical
Columcille the resplendent."^c

There is some doubt as to the exact year in which Baithen died, but 600 is the most probable. Tighernac dates it in 598, the Ulster annals in 597, and taking his birth as in 536 and adding his age 66 as given by Tighernac, we get 602 as the year of his death. Dr. Reeves has a very learned and ingenious discussion on the date of the death of Columba, in which he seems to prove with tolerable certainty that he died in 597. The authorities differ as to the length of time that Baithen survived him. Four years is mentioned in the Brussels M.S. poem above quoted, and one is mentioned in Baitan Mor's life of Columba, quoted by O'Donnell and also by Ussher,^d but the weight of testimony is three years, so that the most probable year of Baithen's death is 600.

So lived our saint and so he died. There is no mention of the place in which he was buried, but we may hope that his ashes rest in peace in the lone grave-yard of Iona.

Pointed, quaint, and often plaintive as the writings are from which the foregoing compilation has been made, yet while professing to detail actual occurrences, they invest events and persons with such an atmosphere of legend and supersti-

^a Acta S. S.

^b Reeves's Adam. p. 309.

^c Book of Abits of C. C. Reeves's Adam., p. 182, note.

^d Ussheri prim., p. 701.

tion, that it is only occasionally and by partial and broken glimpses that we can discover a trace of the real. From them, however, such as they are, and from the characters which have been left of him, we can see enough of Baithen to have some idea of the man. He is described as being, next to Columba, the best acquainted with the scriptures, and to have the greatest learning of any on this side the Alps;^a for his zeal, prudence, sanctity, and primitive simplicity of manners, Columba himself used to compare him to St. John the evangelist. It is said also that he was not to be compared with the wise and learned only, but rather with the patriarchs and prophets of God and with the apostles, seeing that in him the holy spirit, the fountain and origin of wisdom and prophecy, reigned supreme. He was wise with the wise, a king with kings, an anchorite with anchorites, a monk with monks, popular with the laity, poor in heart with the poor, like the apostles in the extent of the charity which burned within him, rejoicing with those who do rejoice and weeping with them who weep; but among all these gifts of divine goodness, true christian humility reigned as powerfully within him as if it were part of his very nature. No one ever saw him idle—he was always engaged either in reading, praying, or working. He obeyed so closely the divine precept, to pray without ceasing, that he would not allow so much time as intervened between swallowing two morsels of meat, or between reaping a handful of corn and laying it in the sheaf, to pass, without putting up an ejaculation to heaven. As far as human frailty permitted, he fulfilled the commands of God, subdued the flesh, and armed with spiritual armour the inner man against his enemy. Yet such was his humility, that no one could be more careful in protecting their earthly treasure than he was in avoiding any ostentation of his heavenly graces.^b Of a kingly race, having his kinsmen kings of the adjoining countries, he reigned indeed a king, spiritual however rather than temporal, but a powerful and enlightened ruler. “Patriarch, Abbot, and King,” he influenced all the adjoining countries, advised their kings, was arbitrator in their differences, and ruled their priests. Such a character well merited the title of “Saint,” which is given to him in the *Coden Salmanticenses* which contains the earliest notice of him extant, and which he has retained ever since.

He was the founder and patron saint of Teach Baeithin, (*i. e.* *Œdes Baitheni*), in the territory of Tir Enna in Tir

^a Ussheri prim.

^b *Acta S. S.*

Connell, now known as the parish church of Taughboyne (locally called Toboyne) in the barony of Raphoe, county of Donegal.^a

There is no mention of Baithen having personally visited or preached in this district, but that he did so is by no means improbable. It was from Iona that christianity was introduced into Northumbria. Colman, bishop of Lindisfarne, (who left it in 667,) was a disciple of the seminary of Iona, though not of Columba himself as is erroneously stated in Jamieson's history of the Culdees.^b In the Firth of Forth there is the island of Inchcolm with its ancient cell and picturesque ruins. On its shores Dalmeny and other churches consecrated by the same sect, and nearer still St. Bothans or Gifford, all serving as so many stepping stones to this eastern district.

There is, therefore, no improbability that Baithen himself visited this very spot, and transporting ourselves in imagination backward for 1,300 years, we may be allowed to figure him of athletic frame—of commanding mien—energetic and active—zealous for the propagation of his religion—animated by a love of adventure—as the old poem says “noble and angelical,” and having humbly received a blessing from Columba leaving the island monastery of Iona—after crossing Mull, visiting with all the freedom of an equal, his relative, Aidan, King of Argyle, at Dun Monadh—stirring afresh the pure fire which had there been lighted by Columba—thence travelling, often alone and on foot, through tangled forests and dreary swamps—preaching the gospel on every opportunity to a wild people, and exhibiting its power in his own character of meekness as well as courage—enduring fatigues and privations without complaint—journeying from place to place, sometimes living with a lone monk in a lowly cell, and anon received with honor by the King of Strathclyde—enjoying a season of holy converse with St. Mungo, in his cell on the banks of the pure waters of Clyde, where now stands the manufacturing capital of Scotland, with the din of its thousands of factories, the merchant fleets on the polluted waters of its river, and the virtue, vice, and wealth of its half million of inhabitants—thence across to the Forth, where on Stirling's Castle-hill Agricola's ramparts had fallen to decay, but had not been succeeded by any later buildings—lingering on the lovely shores of the Firth to visit the cell of Dalmeny and that other island monastery of Inchcolm, to found, perhaps, a

^a Adam. p. 372.

^b Jamieson's Culdees, p. 19.

at church Gifford, which, however, was destined not to endure—pursuing his weary way across the Lammermoors, till his eye rested on a small valley, green amid surrounding heather, fringed with wood among surrounding barrenness, with a river joined by two sister tributaries peaceably wandering through it, a well, gifted with miraculous virtue gushing out at its side, and on the mountain shoulder beyond, a village, which in the course of a few years was to become the royal residence of Edwin, whose ruins still remain—and as his soul was gladdened by the fair prospect of these green pastures and still waters, is it to be wondered that he should remain here a while, and that he should wish to endow so lovely a spot with another and a nobler loveliness, and to make it a centre from which should be distributed to the surrounding country the blessings of religion, learning, and civilisation? A simple church it must have been which he founded here, constructed, probably, of dry stone or rough timber and thatched with heather or the fern. Beside it a hut, which he himself would at first inhabit and then leave in charge of a favourite pupil, when he went to excavate new heathen and found other churches. And if his spirit were ever permitted to revisit this spot of earth, we can conceive how it would be grieved when it saw the church which he had founded, rebuilt indeed and enlarged, but perverted to the worship of a false religion, and become the abode of ignorance instead of being the light of the Lammermoors, until at the Reformation it again became the seat of a pure worship, when Dame Elizabeth Lamb the Lady Prioress, and her three nuns, unable even to write their names, left it for ever.

“Hæc pauca de vita S. Baithini.”

Additions to the Zoology of Berwickshire. By R. EMBLETON.

COLUMBA TURTUR; The Turtle Dove. A specimen of this rare visitant was shot here a short time ago, but was so much shattered as to prevent its preservation.

F. CIRRIPIEDIA. G. BALANUS.

B. porcatus (Darwin.) *B. Scoticus* (Brown.) *B. costata* (Donovan.) From deep water on stones and sticks, not uncommon.

B. crenatus (Darwin.) *B. borealis* (Donovan.) Common.

B. Hameri (Darwin.) *B. candidus* (Brown.) On the Longstone, very fine; but sparingly.

On Fossil Antlers of the Roebuck and Gigantic Irish Elk, found at Coldingham, in 1859. By JAMES HARDY.

[With a Plate.]

In October, 1859, while cutting a new course for a small burn, called the Court Burn, that runs through the Weavers' or Tumbling Down Green in Coldingham, close by the foot-path that passes to the east of the Glebe, the workmen came upon two antlers of the Deer family, imbedded at the depth of five or six feet amidst a deposit of gravel, earth, and large boulders, similar in appearance to those collections of water-worn stones and pebbles that underlie the common soil in many parts of Berwickshire. These remains Mr. Wilson of Coldingham kindly procured for my inspection. They are of much interest, being, it is believed, the first fossils detected in the Berwickshire superficial gravels; and one of them,—the Irish Elk, is as yet unrepresented in Scottish formations.* One of the antlers is nearly perfect. It is that of the Roe-buck (*Cervus Capreolus*.) It corresponds in form with the antler of the sixth year, in fig. 203, of Professor Owen's "History of Fossil Mammals, and Birds." The specimen is coated with a reddish soil; the root and the apex of the first snag are fractured; in other respects it bears few marks of having been rolled. It is 9 inches long measured along the curve; 5 inches to the first snag; and 7 inches to the second. The diameter of the beam is $\frac{3}{4}$ to 1 inch. The snags are acute; the first is $1\frac{1}{4}$; the second and the apical portion $1\frac{3}{4}$ inches long, respectively. The Roe once frequented the Border district in numerous herds, but the present example dates beyond the historical period. In England, as a fossil, it has been found associated with the Mammoth and other extinct forms.

The antler of the gigantic Irish Elk (*Megaceros Hibernicus*) is, unfortunately fragmentary; only the palm with its ramifications having occurred. Externally it still retains some of its native lustre and light brown hue. The hinder side is considerably paler than the front. On the back it is coarsely longitudinally furrowed and ridged. On the front the furrows are waved in the hollow central part but longitudinal elsewhere. The ridges and furrows are obliterated towards the apices of the branches. The intermediate pair stand on an advanced base, are shortest and straightest, nearly correspond in length and size, and taper from the base to the apex. The

* Can the following refer to it? In Maxwell's "Hill-Side and Border Sketches," I. p. 317, it is said that, near North-Berwick, "a medal of Trajan, a fibula, a patera, and a horn of a Moose-Deer," were discovered.

two exterior are considerably larger and flatter, and are more clumsy and curved. The lowermost or smaller is more pointed than the other, commencing suddenly to taper from a sort of elbow $2\frac{1}{2}$ inches from the tip. The palm is considerably rent by a crack, and the longest branch wants its tip. The specimen bears only a general resemblance to those given in "Owen's Fossil Mammals," &c., figs. 184 to 186, and that figured in Jameson's edition of Kerr's Translation of "Cuvier's Theory of the Earth."

The Megaceros shed its antlers periodically like the Deers, and, as with them, these were subject to variations in dimensions and form at different periods of the animal's growth. It is also considered that the female may have had a peculiar sort of antler, but the evidence of this is not very explicit. Often the antlers of the same pair had been unequally developed; the one being dwarfed relatively to the other. Professor Owen has seen one with the right antler having a palm 12 inches broad, and the left one 16 inches broad. The present example is less than any he mentions. One figured corresponding to the state of the antlers of the Fallow Deer, its nearest modern representative, of the 4th year, was 14 inches across the palm, and belonged to an antler 5 feet in length. The palm of ours is only about 10 inches in width. As it perhaps belonged to a younger individual than any yet put on record, I have been induced to give its measurement in detail.—

PALM,

broken off and cut at what I shall call the wrist, being the top of the beam.

Diameter of section of the wrist	$2\frac{5}{8}$	by 2	inches
Circumference of the wrist	$9\frac{1}{4}$		"
Circumference below the branches	12		"
Width of the palm measured in front. . . .	9		"
Width of do. on the back, being increased by a dorsal ridge	10		"
Breadth across the tips of the branches . .			
Length of the longest branch from the wrist to the tip, which is fractured }	14		"
Inner length of this branch			
Breadth of ditto	$2, 1\frac{1}{2}, \frac{1}{2}$		"
Circumference of ditto at thickest	5		"
Interval between it and the next, 2, 3, and 4			"
Length of the second branch.	$4\frac{3}{4}$ and $4\frac{1}{2}$		"
Length from the wrist to its tip	$10\frac{1}{2}$		"
Breadth at base.	$1\frac{1}{4}$		"

Greatest circumference.....	3 $\frac{1}{4}$ inches
Interval between it and the third, same as No. 1.	
Length of the third branch	4 by 5 $\frac{1}{2}$ „
Greatest breadth (it is flatter than the second)	1 $\frac{1}{2}$ „
Greatest circumference, increased by a ridge on the back	4 $\frac{1}{4}$ „
Length of the fourth branch, on its inner aspect	5 $\frac{1}{2}$ „
Length externally, or from the wrist to the tip	10 „
Breadth	1 $\frac{1}{2}$ „
Greatest circumference.....	3 $\frac{3}{4}$ „
Interval between it and the third, 2, 4, and 4 $\frac{1}{2}$	„

In their development, the antlers of this stately animal sometimes attained a vast extent. One dug out of a marl pit near Drogheda, in Ireland, described by Dr. Molyneux in the “Philosophical Transactions” for 1697, had antlers 10ft. 10in. in expansion. Professor Owen mentions the palm of one reaching the breadth of three feet. As regards the size of the animal itself, the skeleton discovered in the Isle of Man, in 1821, and now in the Edinburgh University Museum, is 6ft. 1in. high, exclusive of the neck and antlers; and the body is 5ft. 2in. in length, (See Edinburgh Philosophical Journal, VIII., 1823, p. 198.) The skeleton figured in Owen’s work, p. 444, is in height 10ft. 4in. to the summit of the antlers.

The remains of the *Megaceros* are abundant in the marl beneath peat bogs in Ireland. The English localities are Folkstone in Kent, Walton in Essex, Norfolk, and the peat of lacustrine deposits in Yorkshire. According to Owen it was a contemporary of the older *Uri* and *Bisontes*, and its other associates in the pasturage of the ancient lands, were the Red Deer, the Roe-buck, and the Goat, together with a Wild Horse, a Wild Ass, and the Wild Boar. “It was once imagined,” says De la Beche, “to have existed only at an epoch anterior to man, but it is now considered that it was co-existent with him; although this by no means proves that it did not live upon the earth previous to him, as seems to have been the case.”

PLATE II.

Back view of Palm of Antler of *Megaceros Hibernicus*, Coldingham.

What is the use of the Lark's long heel-claw? By RALPH CARR of Hedgeley.

The serrated appendage on one of the toes of the Bittern was for a long time a perplexity to the best ornithologists, until at length the bird was observed to avail himself of it to cleanse his beak from the slime adhering to it from the fish and reptiles on which he had been feeding. But for such an admirable instrument as this curry-comb or scraper, his beak would not only have been liable to remain daubed with slime, but the latter would have glued the downy feathers from his plumage around his mandibles, until the mass became irremovable. The Bittern's serrated toe is therefore manifestly one of the most beautiful contrivances in nature. No more distinct and sufficient explanation of its presence could possibly have been given than that we now possess.

As I have never seen the Lark's long heel taken as a subject of inquiry, with a view to explain why so small a bird should have been furnished by its Creator with such an unusual extension of foot backwards, I will venture to offer a solution of the mystery, being one which presented itself to me one evening as I was returning home from shooting late in autumn. The season was just verging upon winter, the afternoon had been a wild and stormy one with cold showers of rain from the north-west, and the wind was rising into a gale at sunset. I was crossing an exposed, naked stubble, where the surface of the earth, glittering with wet, was beginning to freeze, under the intense cold, caused by rapid evaporation. A number of Larks kept rising from before my feet, one after the other, as I walked along, and then lighting again close before me. I slackened my pace and walked slowly, to observe their conduct on the ground; for I said, "what a night you will have of it here, my small friends, when I am snug in bed! If I come back before sunrise shall I find you all frozen to the ground? What hinders you to be so even now, —why are your breasts not already fast bound to that sparkling icy soil among the stubble? How is it, even if you sleep standing, that your feet are not frozen fast?" I then bethought me of the claws or nails upon each toe, which are largely developed in the Lark, and permit only a partial contact of the sole with the ground when the bird is at rest. "But if you sleep standing, or rather in such a gale as this, cowering, how is it that you are not blown away?" Then occurred to me the beautiful provision of the long, arched heel extending out rearward, on the principle of a flying buttress to

a building, or an outrigger to a boat. It is a most beautiful provision to give stability on a flat surface.

Without calling in the agency of frost upon a freshly saturated soil, we may be sure that the naked earth in winter is very frequently too cold for so small a bird to rest upon it in close contact with the body, and that in reality Larks do often roost in a standing or cowering posture, and always facing the wind.

The other birds that haunt similar open unsheltered ground, such as the Snipes and Plovers, are all nocturnal feeders, active and in motion during the coldest hours. The Buntings participate, in a minor degree, in the ground-roosting habits of the Larks, and are furnished like them with an elongated hind-claw, though less fully developed.

Botanical and Zoological Notes and Localities.

By JAMES HARDY.

I. BOTANICAL.

PAPAYER DUBIUM. At Horton and Hetton the seed-pods of this were swollen to twice their usual size, some of them being quite globular, with the interior fleshy and full of sap, by the attacks of a family of larvæ in the interior, apparently those of a Cynips, but too immature to decide.

VIOLA HIRTA. Kyoie Crags.

DIANTHUS DELTOIDES. Heathpool Linn, north side.

VICIA SYLVATICA. In Roddam Dean. In a visit to this dean in July 1860, following the foot-path I found the following good plants; which it may be as well to enter on the Club's records, as the locality will well repay a visit. *Hieracium murorum*, *H. subaudum*, *Myosotis sylvatica*, *Crepis succisæfolia*, *Melica uniflora*, *Rubus saxatilis*, *Campanula latifolia*, *Polystichum aculeatum*, *Carduus heterophyllus*.

EPILOBIUM ANGUSTIFOLIUM. Heathpool Linn.

HIERACIUM SUBAUDUM. Wooler water below Langleyford; Heathpool Linn; junction of Broadstruther and Common Burns.

CREPIS SUCCISÆFOLIA. Not uncommon in the Cheviot district. On the College at Heathpool, and on Wooler water below Langleyford.

CARDUUS NUTANS. Middleton Hall Shepherd's House; Hetton where there is a white var.; Roseden. A good Berwickshire name for it is "Queen Anne's Thrissil."

TRIENTALIS EUROPÆA. On Penmanshiel moor behind Greenside hill. Along with *Listera cordata* at the foot of Collierheugh Crag, (this is the ridge of sandstone between Black Heddon Hill and Kylee Crag.)

CLINOPODIUM VULGARE. Hetton burn.

ADOXA MOSCHATELLINA. In a wood on Wooler water opposite Middleton Hall Shepherd's House.

ANOMODON CURTIPENDULUS. In great abundance investing the base of a thorn in a hedge by the road side above Abbey Park; and again in a similar locality to the north of Hillend.

ORCHIS BIFOLIA. Meadow below Langleyford. *Carduus heterophyllus* grows there also, and on the Diamond burn where it crosses the public road.

CORNUS SUECICA. In modern times we find the *Cornus* on the eastern side of the great Cheviot, as we ascend from Broadstruther, growing among the heather in a depression before we take the steep ascent to the summit. That this is Ray's locality admits of doubt; at least it does not accord with that which he indicates. Writing to Lister July 17th, 1670, he says, "Tho. Willisell hath been lately here in his return out of the north, and brought with him several rare, and some nondescript plants." One of these was the *Cornus*, found "on the north-west of the highest of the Cheviot Hills." (Ray's Correspondence, p. 61.) In the Appendix, p. 339, to his *Catalogus Plantarum Angliæ*, London 1670, the locality is specified more precisely. "On the north-west end of the highest of Cheviot hills, among the rocks on the west side plentifully." To its discoverer he bears honourable testimony. Here it was found, "and shown to me this summer by Tho. Willisell, a person employed by the Royal Society in the search of natural rarities, both animals, plants, and minerals; the fittest man for such a purpose that I know in England, both for his skill and industry." (p. 340.) In the *Synopsis Stirpium Britannicarum*, 2nd edition, London, 1796, p. 146, the notice is the same, only latinised. "In Northumbriæ montibus Chevioticis dictis, in latere occidentali Septentrionalis partis montis altissimi copiosissime." On the western side of the northern part of the highest mountain most abundant. Has it still to be looked for in the direction of Hen-hole?

II. ZOOLOGICAL.

HARELDA GLACIALIS. A pair of the long-tailed Duck was shot in the Harbour Loch, Coldingham Shore, in January, 1860.

ORTHAGORISCUS MOLA; Short Sun-fish. A fine specimen of this rare fish was found by a boat's-crew of the Coldingham fishermen, on the morning of 16th October, 1860. While sailing between Lumsden shore and Mawcarrs near Moorburn, they were surprised to observe a large fish, with its back fin above the water. Having fixed it with the boat's hook, they took it on board and brought it to Petticowick at the west end of St. Abb's Head. Having given notice to Mr. Wilson of Coldingham, he went to inspect it, and perceived it was a sun-fish. Dr. Hogg of London afterwards joined him in the examination. From a pencil sketch made by Mr. Wilson, and also a photograph, compared with Yarrell's figure in the "British Fishes," and a beautiful drawing made by Mrs. Johnston of a fish of the same kind caught near Berwick, in 1851, I found it was the Short Sun-fish (*O. Mola*.) At my request, Mr. Davies, of the Edinburgh Natural History Museum, subsequently saw the fish, and came to the same conclusion. The weight of the fish was 70lbs.; the length about 3ft. exclusive of the caudal fin; its depth about 2ft.; and from the tip of the dorsal to the tip of the anal fin, the extent was about 4ft. I owe these particulars to Mr. Wilson, but for whose exertions it would have lain unnoticed on the shore. A fish-curer sold the fish to the Edinburgh Anatomical Museum, where it is now preserved. About the same period another fish of the same sort was captured off Dunbar, and was exhibited in the town. A very small one was once landed at the Cove Shore. In 1812 we find Mr. Patrick Neill advertising to the appearance of several immature individuals in the Firth of Forth. (*Scots Magazine*, 1812, p. 574.) It is recorded in Sibbald's "*Scotia Illustrata*," 1684, having been first ascertained to be a native of the Firth of Forth, by Sir Andrew Balfour. The Berwick fish already alluded to came under the notice of Dr. Johnston. The following entry of it appeared in the *Berwick Advertiser*, Sept. 27th, 1851. RARE FISH.—"On Monday a party of fishermen belonging to Spittal, caught with a hook, when about ten miles out at sea, a sun-fish, a species very rarely found here. It was shown to a naturalist who informed them of its name, and stated that it was not full grown; it weighed 40lbs. It was sold to a fish-monger, who has, we understand, forwarded it to Nottingham."

PAGURUS PRIDEAUXII, LEACH. White's *British Crustacea*, p. 75. This hermit-crab unrecorded for the Berwickshire coast, was found in deep water off Burnmouth, lodged in a curious domicile formed of a sponge, *Halichondria suberea* of Johnston, *Brit. Sponges*, &c., p. 139, &c. The sponge was

of a flattened oval shape, $1\frac{1}{2}$ in. long, by $\frac{3}{4}$ broad, of a dirty white colour, and close uniform texture. It had completely invested a small *Buccinum undatum*, in which the crab was a sojourner, and thrown an ample whorl around it, which was furnished with a well formed mouth and regular lip, strikingly imitative of the fabrications of a true shell-bearing mollusc. Montagu first remarked the parasitism of this sponge on shells enclosing the *Pagurus*. In the Edinburgh New Phil. Journal, VIII., (1830,) p. 235, 236, Dr. Coldstream gives an account of this sponge which had attached itself to a *Turritella terebra* inhabited by a *Pagurus*, and so enlarged it by two additional turns, that it became like a *Buccinum*. His explanation is similar to mine. "The Crab takes possession of the *Turritella* when young; the sponge then attaches itself to the shell, and, as it grows, is forced, by the motions of the crab, to assume a spiral form, with a cavity enlarging towards the mouth, corresponding to the progressive development of its crustaceous inhabitant." In the British Museum List of British Sponges, the specific name of this *Halichondria*, is altered to *domuncula*=*Alcyonium domuncula* of Olivi. I sent my specimen to the British Museum.

NANOPHYES LYTHRI. This pretty Curculio I found on *Lythrum Salicaria*, at Spindlestone Pond, in 1848; and again in 1860 at Hetton Burn, in company with Mr. Boyd. It is common in the latter locality.

VANESSA Io; Peacock Butterfly. One on the border of Penmanshiel Wood, in May.

Notes on the distribution of Acmaea testudinalis.

By GEORGE TATE, F.G.S.

The recent discovery of new localities in our district for the pretty, smooth, tortoise-shell Limpet—the *Acmaea testudinalis*—suggests inquiry into the history of its distribution.

It is a boreal species inhabiting the shores and seas of Greenland, Norway, Zetland, the Orkneys, and the northern parts of North America. It has, however, been long known to range along the western coast of Scotland and to be pretty abundant at the Isle of Arran and among the Hebrides. Not many years ago it was first seen on the Irish coast; but it is now known to extend as far southward as Dublin Bay. It was observed on the north coast of the Isle of Man in 1836, where it has since considerably increased; but it has not yet been discovered on the west coast of England or Wales.

The earliest notice I can find of its occurrence on the east coast of Britain, is in the *Naturalist* for 1851, where it is stated to have been taken in the Bay of Nigg in Kincardineshire. As an English shell, however, it was first recorded by myself in the *Berwickshire Transactions* for 1856, from a solitary living specimen found at low water mark on the Longstone, one of the Farne Islands. Since that time, Mr. Dickie reports it in 1857 as abundant in Aberdeenshire; Mr. James Hardy in 1859 found it at Cockburnspath; Mr. Wm. Boyd has this year taken several specimens near low water mark from the rocks at Spittal, south of Berwick, and more recently it has been found at North Sunderland. In the county of Durham, it has been recently discovered. Mr. Albany Hancock, in 1859, records it from Whitburn, and states that in September of 1857 he took three specimens, after much searching, at Roker, which is the most southern locality for it as yet known on the east coast.

These facts suggest the inquiry, has this Mollusk been living in our district prior to 1856 and escaped notice, or has it only recently become a denizen of our seas? I cannot but think that, if it had existed there for any long period prior to 1856, it must have been observed; for the Berwickshire, Northumberland, and Durham coast has long been carefully searched by able and zealous naturalists, and the *Acmæa testudinalis* having well marked specific characters, readily distinguishing from other Patelloid forms, must have been detected. The reasonable inference is that, this Mollusk is extending its range from its northern specific centre and gradually migrating southward. It is desirable that the appearance of this Mollusk in new localities should be noticed, that hereafter the causes and extent of its southern distribution may be determined.

On a fragment of a Red Deer's Antler found at Coldingham, in 1858. By JAMES HARDY.

Besides rescuing from destruction the fossil relics described in a preceding paper, Mr. Wilson has handed to me a portion of the antler of a Stag or Red Deer, dug up in Coldingham Churchyard, in 1858, whose claims of a patriotic character, will appeal with better relish to some, than those productions of the pre-historic ages, that lie beyond the reach of common sympathies. The fragment, he writes, was discovered while opening new ground for a grave "at the base of one of the

cloisters at the back of the Priory, about 9 feet below the surface, and nearly at the foundation. The earth appears to have been an accumulation of rubbish worked into soil." It is the basal portion of the horn, and is 6 inches long; the burr is $8\frac{1}{4}$ inches in circumference, and the beam immediately above it 7 inches. It indicates a size of antlers seldom seen in modern Highland deer forests. Since its owner formed the ingredients of many a monkish pasty, no doubt it belonged to a "hart of *grease*," and being the present of a monarch,—to a "hart of ten," likewise; for as Spenser says, as—

"Each man's worth is measured by his weed (garment),
So harts by horns."

Deer once ran wild on the Lammermoors, as Earl Percy and his men, in 1372, found to their consternation.* There is a prevalent notion that the Priors of Coldingham were mighty Nimrods, but the ground for such a belief are not very substantial. That Houndwood was their hunting seat† is a popular fiction, constructed on the name of the locality, which existed previous to its becoming a possession of Coldingham. In the "Account Rolls" there is no allusion to a stud ever having been maintained there. A single palfrey was the occupant of the Prior's stable at Coldingham. His other horses were "sumpters" and "avers,"—beasts of burden and draught. William de Bamburgh alone, from 1357 to 1359, kept one or two "hackneys." Farming, not hunting, was the Coldingham "hobby," especially wool-growing, to encourage which, the church was adorned in 1370 with an image of St. Blase, the patron of wool-combers.‡ The only Prior we read of indulging in the chase, was Robert Blackadder, a native of the Merse, who while hunting in 1519, fell with his six attendants, by the hands of his hereditary foe, Home of Wedderburn. Malcolm the IV. and William the Lion chartered the monks with a right of warren, and the privilege of the other game also, without explicitly bestowing free-forestry, which was conferred by Alexander III., in 1276.|| From the terms of the writ the forest-grant chiefly respected the liberty to cut timber. The monks, however, had "venyson" in their woods of Brockholes, Harewood, and Denewood, when let in farm

* Buchanan's History of Scotland, II., p. 40. Ridpath's Border Hist. p. 348.

† Carr's Coldingham, p. 26.

‡ Priory of Coldingham Inventories, &c., p. lxi.

|| Coldingham Charters in Raine's Hist. of North Durham, Nos. XXVII., XLV., and LXVII.

to Thomas Atkynson in 1429-30;* perhaps the "aliquam bestiam silvestrem" of King William's endowment;—stragglers now and then from the wild companies that the Lammermoor shepherds were accustomed to scare from the corn-fields, with "rattles made of pieces of dried skins, distended round ribs with wood, that were bended into a semicircular form, enclosing a few hard pebbles, and fixed to the end of long poles."

Was the gallant stag that furnished this antler, one of these wanderers on the Berwickshire hills? We think not. There is no show of native venison in the Priory larder. When the monks did get it, it arrived from a distance; and was welcomed with a flourish of trumpets; and so precious was it held that they eked it out to the last morsel, salting it down like their beef marts, "mutton-carcases," "pork flitches," "dog-draves," salt herrings and lampreys, "stock fish," and similar robust fare. This honour they owed to the heroic Bruce, perhaps in remembrance of hospitable offices during the siege of Berwick, by a charter given at Newbottle on the 26th December, 1328, in the King's declining years, and during an interval of peace betwixt the realms. The witnesses were the Chancellor and the Earl Marshal, Robert Bruce, jun., Thomas Randolph Earl of Moray, and Sir James Douglas—and more distinguished concurrents Scotland could not produce. He then, on account of the devotion he had towards St. Cuthbert and the monastery of Durham, conferred on the monks an annual donation of five harts at the feast of St. Cuthbert's Translation, the 4th of September. These were to be taken from his forest of Selkirk—that famed forest of Ettrick where, when

" Its waste glens with copse were lined,
 — Doe and roe and red-deer good
 Have bounded by through gay greenwood."

The game was to be delivered up to them by the principal forester, at the festival of the Assumption of the Blessed Virgin (15th August) and to be conveyed by him to the Priory at Coldingham at the King's cost.† In thus promoting the festivity of "their feast day," the king was in a manner restoring St. Cuthbert some of his own property again,

* Priory of Coldingham, (Surtees Society,) p. 105. Harewood is the field on Brockholes farm facing Grant's House. The Brockholes mentioned is the Easter Brockholes which stood near Brockholes dean, perhaps the Denewood of the charters. The Atkinsons, now corrupted into Aitchison, held it for generations; and their descendants are still farmers in the neighbourhood.

† Carr's Hist. of Coldingham, p. 267, 325. Chalmers's Caledonia, II., p. 982.

for he was the apostle of the Southern Borders, as well as Bishop of Lindisfarne, and nowhere was he more honoured, as his eulogist Reginald assures us, than in the vicinity of the ancient Forestry. He even, and somewhat to our purpose, devotes three chapters (86, 87, 88) to detail the feats of a stag, which hunted by a Lothian Knight, Robert Fitz Philip, on St. Cuthbert's day, 4th September, 1165, took refuge in a churchyard, under the protection of the saint. That was the time when stags were at their best, and very fat. "Et natura cervorum plenitudine crassitudinis et dilatata adipe pinguedinis redundaverat." Exquisite vision for a monk! King Robert's present was acceptable in every respect! The people are assembled in their holiday attire to the saint's festival, and to view the stag in his sanctuary. The weather being fine, they dance, and leap, and sport, put the stone, and joke, and sing; till at last a luckless lad with a stake pokes up the stag reposing in the porch of the church. Away it bounds, gores one of the dancers to death, and on its flight to the woods is intercepted and killed by one of its original pursuers. For the rest of the story consult Reginald's *Miracles of St. Cuthbert*.

How long the monks enjoyed the benefit of "Good King Robert's Testament" in their behalf, is uncertain. David II. renewed the liberal grant of his father in 1344. This pleasing gift is thrice recorded in the annual account rolls of the Priory (pp. vi, vii, and cvii.) In 1329 there was paid 6s. 8d. for writing the charter. In 1330, there was paid on account of the carriage of the five stags from the forest to Coldingham (King Robert had died in 1329, and his forester appears not to have disbursed the passage-money), and also for salt for the same, and the expense of a man by the primitive name of Adam ———, 11s. 4d. In 1344 the clerk's fee for engrossing the confirmatory charter was 6s. 8d. It is to some of these consecrated animals, most probably, that the remains of this noble antler once appertained. Reginald tells us that in his time, the horns and bones of deer were converted "into combs, draughtsmen, chessmen, dice, spigots, &c.;"—a chapter of economy our Coldingham monks had overlooked; for though relishing the venison, they had cast to the dogs the bones to gnaw and carry away.

Saxon Sculptured Stones at Norham.

[With Two Plates.]

When the Club met at Norham in September 1858, the Sculptured Stones, which have at different times been dug out of the old foundations of the Saxon Church, were examined with much interest, and a wish was expressed to have them drawn and figured in our Transactions, as illustrating the Saxon styles of ornament in the ninth century. Mr. T. G. Grete has presented drawings of them to the Club, and we are indebted to Mr. F. R. Wilson, Architect, Alnwick, for preparing lithographs of these drawings. Some account is given of these Sculptures in the present volume of the Transactions, pages 121 and 122.

PLATE I.

View of the Sculptured Stones as they are built up into a pillar in the Church-yard at Norham.

PLATE II.

Separate drawings of stones built up into the pillar but not seen in plate I., with enlarged drawings of some of the more remarkable Sculptures.

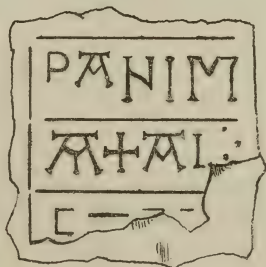
G. T.



T. G. GRETE DEL.

TRANSFERRED BY F. R. WILSON.

STONES BUILT UP IN THE CHURCH YARD AT NORHAM.



PROCEEDINGS

OF THE

BERWICKSHIRE NATURALISTS' CLUB.

Address delivered at Berwick, on the 27th of September, 1861. By D. MILNE HOME, Esq., of Wedderburn, President.

GENTLEMEN,

I NOW proceed to the duty which at the close of every summer session specially devolves on your President, viz.—the delivery of an address, which shall embody the proceedings of the club during the past year, and shall also submit to your consideration some comments on these proceedings, and such suggestions for the management of our institution as your President may have thought of.

The practice of this annual address, appears to me to have many advantages. To those members who attended the meetings, it in some degree renews the enjoyment and instruction which the meetings had afforded. To those members who were absent, it shows in what way our club is carrying out its objects, and on what grounds it claims a continuance of their support. To the president himself, it

supplies a stimulus, by keeping him on the watch to select fitting topics for the address expected from him.

The principal part of my duty, which is to bring before you the proceedings at our several meetings, is much facilitated by the admirable manner in which the minutes of these meetings are kept. Mr. Tate, one of the secretaries, to whom we are indebted for them, not only narrates faithfully everything important or interesting which occurs, but clothes his record in such felicitous language, that the reading of it, so far from being tedious, is ever listened to by us with pleasure.

I therefore make no apology for engrossing in my address these minutes *verbatim*;—and after each, I will offer to you such comments as the minutes may have suggested to me.

Whittingham Meeting.—"A wet and threatening morning deterred several members from attending the meeting of the club held at Whittingham on the 13th of September, 1860. Early, however, in the forenoon, the rain passed away, and the members who assembled enjoyed all the advantage which a pleasant day could afford.

After breakfast at the Castle Inn, the party visited Whittingham Church, one of those rare structures which carry us back into Saxon times. It was probably found in the middle of the eighth century, by Ceolwulph one of the kings of Northumberland, who, some years before he died, abandoned his regal dignity and retired into the monastery of Lindisfarne which he richly endowed. Simeon tells us,—‘*Intravit autem Lindisfarnense monasterium Sancto Cuthberto secum conferens thesauros, regios, et terras, id est Bregeſne^a et Werceworde^b cum suis appendiciis, simul et ecclesia quam ibidem ipse ædificaverat: alias quoque quatuor villas Wudeceſtre, Hwitingham,^c Eadulfinham,^d et Eagwlfingham.*’^e

Greatly was it regretted that much of the old Saxon work was destroyed, when the church was repaired and altered in 1840. Fortunately, Rickman has given a brief account of this church, and a drawing of the tower as they existed before

^a Brainshaugh?

^b Warkworth.

^c Whittingham.

^d Edlingham.

^e Eglingham.

modern alterations had marred their peculiar and interesting features. At that period, the tower, the west end of the aisles, and one arch on the north side appeared of the same early Saxon style of architecture. The corners of the tower and the exterior angles of the aisle walls had that quoining characteristic of Saxon work, which consisted of a long stone set at the corner and a short one laying on it, and bonding one way or both into the wall. In the upper part of the tower, there was a double window, with the openings separated by a rude balustre ; and lower down, was another original window, having an angular arch formed by two stones. A very plain arch with a large rude impost and a plain square pier remained of the old nave. I have seen similar architectural characters in the Saxon tower of the Church of St. Benet, in Cambridge. The next arch, eastward of the Saxon one in Whittingham Church, was of the common Norman form, and the remainder of the church was in the early English style.

Both Saxon and Norman arches have been taken away and replaced with others of the early English style ; the upper portion of the tower has been taken down and the old windows destroyed, and of the original structure, there are left now only the lower part of the tower, which still shews the peculiar long and short Saxon work, and some remains in the interior of the eastern wall, of a rude double circular arch.

Notwithstanding the storms of eleven centuries have broken over this old tower, the rubble masonry and the quoins formed of the gritty sandstone of the district are but little decayed. May we not hope that since time has dealt so kindly with it, man hereafter may lay no ruthless hand on what remains. There is no such relic in North Northumberland ; it is an architectural type of the style adopted by our early forefathers ; it is an unwritten historical record, and we ought not to be deprived of its teachings and associations.

Some members turned aside to view Whittingham Tower, formerly a strong Border Pele, with a vaulted under story and with walls eight feet in thickness. An original entrance and a

window on the east evidence, that it is an Edwardian structure of the 14th century. In a survey made by Sir Robert Brewis and Sir Raufe Elleker, on 2nd Dec., 1542, two towers were then in a good state. 'At Whyttingam' say they 'bene two towers whereof the one ys the mansion of the vycaridge and the other of the Inheritance of Rb't Collingwood Esquier both in measurable good repar'ons.'

Fifteen years ago, the latter tower, now the property of Lord Ravensworth, was repaired and to a great extent rebuilt. An appropriate inscription over the new door-way says—

BY THE MUNIFICENCE AND PIETY OF
LADY RAVENSWORTH

THIS ANCIENT TOWER WHICH WAS FORMERLY
USED BY THE VILLAGERS AS A PLACE OF
REFUGE IN TIME OF RAPINE AND INSECURITY
WAS REPAIRED AND OTHERWISE EMBELLISH-
ED FOR THE USE AND BENEFIT OF THE DE-
SERVING POOR.

A.D. 1845.

Well would it be were all changes and restorations for so good a purpose.

Leaving the village, the party under the guidance of our President and Mr. Collingwood, proceeded to Thrunton Crag. They crossed the branch Roman road which joined Watling Street a little eastward of Whittingham, and which, passing along the base of the Crag and away by Holystone, extended to Watling Street, thus connecting the two great roads which, during the Roman occupation, traversed the county.

A portion of the great Thrunton Wood, which has an area of about 1,500 acres, was examined, but no rare plants were seen; indeed there are few species over this wide area. *Pteris aquilina* and *Lastrea dilatata* were in rank abundance, *Vaccinium Myrtillus* and *V. Vitis-idæa* were also in profusion and in fruit.

The Crag is sandstone and in some parts rises as cliffs to the height of one and two hundred feet. There are great rents in these rocks and tumbled down masses, which here

and there form caverns. One of these, Wedderburn's Cave, was examined; another bears the name of the Priest's Cave. In times of disturbance and insecurity, when the borders, especially, were subject to plundering and slaughter, such caverns may have been used as hiding places, and have taken their name from the persons who found refuge in them. Some persecuted minister of religion may have found temporary safety in the Priest's Cave, and possibly a freebooting Wedderburn may have escaped death by concealment in the dark recess which bears his name.

The ascent through the wood to the top of the crags is very steep, but the party were rewarded for their toil, by the magnificent view they enjoyed over the Whittingham Vale. Resting on the summit for a while, they scanned over the varied and beautiful features of the scene, and traced the boundary of the geological formations which have impressed their character on the district. The fine conical forms of the porphyritic hills, belonging to the Cheviot range, are seen rolling into each other at the head of the valley. A mass of this rock protrudes like a promontory as far eastward as the Ryles, and northward in a deep bay we have old red sandstone conglomerate; some patches of the Tuedian or lower carboniferous group are in the lower grounds at Garmitage and Crawley Dene. From beneath the sandstone hill on which we rested, there comes out one of the lowest limestones of the mountain limestone group, and in one of the shales, interstratified with it, we found a species of *Modiola*. The thick beds of sandstone, forming the great crags of Thrunton, belong to the same formation, and are a continuation of the ridge, which, after bounding the valley of the Till and Breamish at Doddington, Ros Castle, and Bewick, sweeps round by Beanley and Alnwick Moor to Thrunton, and thence in a southerly direction over the bleak upland moors of Northumberland. The broad vale which lies beneath is highly cultivated, adorned with woods and studded over with halls, villages, and hamlets; forming, indeed, one of the most beautiful and diversified scenes in Northumberland.

On the Thrunton Crag, the Falcons some time ago built their nests and brought forth their young ; but they have been driven from their home by the incessant persecutions of gamekeepers, who ruthlessly shot them as "vermin." Any nobleman might be proud of having such tenants of his rocks ; and surely the few rabbits or partridges, which might be taken for food, should not be grudged, in order that this noble bird may not altogether disappear from our district.

Some of the party ascended Callaly Castle Hill, a detached rugged sandstone hill, somewhat conical in form and densely shrouded with wood. The summit, which is an irregular and broken plain of about two acres, is the site of an old camp, which like most of our early fortlets is rounded in form, but modified to suit the outline of the ground. The rampiers and ditches are in some parts very distinct, and the height from the bottom of the ditch to the top of the rampier is, on the west side, 20 feet. On the north side the escarpment of the hill is very steep, and there is but one rampier ; but there are two on the other sides ; and there is a third at a distance of about one hundred yards down the hill on the west side, whence an attack could most easily be made. The ditch in some parts is cut deeply into the sandstone rock. Two entrances are traceable nearly opposite to each other, that on the W.S.W. side crosses the deep ditch by means of a causeway. This fortlet is remarkable, not only for its strong position and the skilful construction of its entrenchments, but also for the peculiarity of its inner rampier, which in some parts is formed of stones roughly squared, built up, and even bedded with lime ; and in this it differs from most fortlets attributable to the ancient British people, for their rampiers are usually made of undressed stones and earth. Probably this, originally a Celtic Camp, was afterwards occupied by another people, who reconstructed with more art the inner wall. The Romans may for a time have occupied it, for one of the Roman roads passes at a short distance.

Callaly House stands at the base of the hill on low ground on the site of an ancient pele tower ; and it is the subject of

a curious Northumbrian legend, which very probably had its origin in the apparent remains of extensive buildings on the castle hill. The legend is briefly told thus:—

A Lord of Callaly in the days of yore commenced erecting a castle on this hill; his lady preferred a low sheltered situation in the vale. She remonstrated; but her lord was wilful, and the building continued to progress. What she could not attain by persuasion she sought to achieve by stratagem, and availed herself of the superstitious opinions and feelings of the age. One of her servants who was devoted to her interests, entered into her scheme; he was dressed up like a boar, and nightly he ascended the hill and pulled down all that had been built during the day. It was soon whispered that the spiritual powers were opposed to the erection of a castle on the hill; the lord himself became alarmed, and he sent some of his retainers to watch the building during the night, and discover the cause of the destruction. Under the influence of the superstitions of the times, these retainers magnified appearances, and when the boar issued from the wood and commenced overthrowing the work of the day, they beheld a monstrous animal of enormous power. Their terror was complete, when the boar standing in the overturned stones cried out in a loud voice—

Callaly Castle built on the height,
Up in the day and down in the night;
Buildd down in the Shepherd's Shaw,
It shall stand for aye and never fa'.

They immediately fled and informed the lord of the supernatural visitation; and regarding the rhymes as an expression of the will of heaven, he abandoned the work, and in accordance with the wish of his lady built his castle low down in the vale, where the modern mansion now stands.

Passing by Callaly the party proceeded to Eslington House, where they were received by Captain Liddell and Seymour Liddell, Esq., the sons of Lord Ravensworth, who had kindly ordered luncheon for the party. Much pleasure was felt in viewing the fine paintings belonging to his lordship, and in

strolling over the beautiful grounds around the house. The collection of pine trees was much admired, especially the *Pinus Laricio*, which may, according to the opinion of Mr. Oliver, the intelligent head gardener who conducted the party over the grounds, become the economical pine of England. Especial attention was devoted to ancient bronze weapons found at Thrunton, which Lord Ravensworth had been so courteous as to bring from Ravensworth for the examination of the club.

The party returned to Whittingham in time for dinner, at which there were present—the President, Messrs. Langlands, Collingwood, William Boyd, F. R. Wilson, J. Church, J. Church, jun., M. Culley, Charles Rea, C. Bosanquet, George Tate, the Revds. F. R. Simpson, Wm. Dodd, J. Walker of Greenlaw, and H. Parker; and as visitors, the Rev. Mr. Carr and Mr. W. Church. After dinner, Mr. Riddell, Mr. T. Brodie, and the Rev. John Irwin were elected members; and Mr. William Church, Mr. Watson Askew, and Mr. Fairfax Fearnley were severally proposed and seconded.

The President then read an able address which was listened to with much interest.

David Milne Home, Esq., of Wedderburn, was elected President for the ensuing year."

At this meeting I was not present, having been then, and for some months previously, in Germany. The only point, therefore, to which I would advert, is my own appointment as president;—an honour which I little deserved, considering that I have never contributed a paper to the transactions, nor for some years been able to attend a meeting. When, therefore, my predecessor, Mr. Carr, last year intimated to me my appointment, I at first declined, especially as I was then in such bad health, that I had doubts of being able to act. But ultimately I was induced to accept, though still unable to divine why I should have been selected. It was only the other day, that I discovered what may have brought upon me such a distinction. In reading the minutes of the Whittingham meeting, I found that one of the proceedings

of the club that day, was to examine a Cavern in the Craggs of Thrunton which goes by the name of "*Wedderburn's Cave*;" and it is observed, that at the period when the Borders were subject to plundering and slaughter, this cave had probably been resorted to by a freebooting Wedderburn, who, to escape death for his malpractices, concealed himself in the dark recess which still bears his name. This interesting piece of family history, at once furnished a clue to my appointment; for my wife, as is well known, is the lineal descendant of this freebooter—inheriting also his estate and name in Berwickshire. The Club, therefore, on account of my connection with both sides of the Border, and also in return for the day's enjoyment in exploring this Cave, probably thought it not unsuitable to appoint Mr. Home, of Wedderburn, their president.

But whatever were the motives which influenced the Club in this matter, I feel very sincerely gratified by the honor conferred, and am very thankful that my health this summer has been such, as to enable me to attend the meetings.

Berwick Meeting.—"The Club met at Berwick on the 11th October, 1860. There were present—Messrs Ralph Carr, P. Clay, J. Clay, Robert Douglas, J. Church, J. Church, jun., S. Sanderson, Geo. Tate, the Revds. J. D. Clark, Wm. Darnell, Hans Hamilton; and as visitors, Rev. E. A. Wilkinson, and the Hon. Fred. Pepys.

After breakfast the accounts were examined and passed, and the subscription for the ensuing year fixed at six shillings. It was resolved that a Field meeting be held in the month of August; that the October meeting be discontinued; and that the last meeting of the year should be at Berwick on the last Thursday in September.

The following were appointed as the places of meeting for 1861, viz.,—

Kelso,	on the last Thursday of May,	
Linhope,	„ „	June,
Grant's House,	„ „	July,
Alnwick,	„ „	August,
Berwick,	„ „	September.

It was also agreed, that the Tyneside Naturalists' Club be requested to unite with this Club in holding the meeting at Alnwick.

Mr. Sanderson exhibited some fossils out of the mountain limestone of the district; one of them was *Gyracanthus obliquus*—a fish spine, from the shale of Scremerston.

The day being cold and stormy no out-door exploration was attempted. A part of the members crossed the river to Spital, to examine an interesting collection of mountain Limestone fossils, from the beds south of the Tweed, belonging to Mr. James Patterson. Besides many of the commoner ferns, there were large specimens of *Actinoceras giganteus* and *Pinna flexicostata*; and of the rare *Orthoceras cornu-vaccinum*.

After dinner Mr. Tate read a paper on bronze weapons found in Northumberland.

The gentlemen nominated at the last meeting were elected members; and the Rev. Wm. Darnell proposed for membership the Rev. Edward A. Wilkinson of Bambro, and Mr. Tate proposed Dr. Robert Clay."

It has occurred to me that it is desirable to keep the members of the Club generally informed of its financial and numerical strength, and that the President's annual address may afford a convenient medium for such communication.

As the minutes of this meeting mention that the accounts for the two previous years were examined and passed at it, I give the following abstract of the revenue and expenditure of the club at that date;—

Income.

	£.	s.	d.
Subscriptions received for the years 1858 and 1859 ...	52	4	1

Expenditure.

	£.	s.	d.
Balance due Secretary, Oct. 27th, 1858 ...	10	5	
Printing Transactions, Circulars, Postages, &c., for two years ...	47	5	0
	47	15	5
Balance in Secretary's hands, 10th Oct., 1860,	£4	8	8

I am able also to mention the result of the examination of accounts this day, viz. :—

Income.

		£.	s.	d.
1. Balance due by Secretary on previous year	...	4	8	8
2. Subscriptions received	... ..	30	14	6
		35	3	2
Expenditure	... ..	27	8	4
	Balance in Secretary's hands,	£7	14	10

With regard to the number of members, I have to state that in October, 1860, the number on our list was 118, since which we have lost one by death, viz., the Rev. Delaval Knight, and that we have obtained, (including 7 who were admitted to-day,) 36 new members, making a total at this date of 153.

Kelso.—"The first Field meeting of the year 1861 was held at Kelso, on the 30th of May, when a large number of members were assembled. There were present—the President, Messrs. Robert Embleton, Geo. Tate, Robert Home, Wm. Dickson, Fred. Collingwood, P. Clay, James Tait, Charles Rea, Scott Dudgeon, John Clay, P. Dickson, Dr. Robson Scott, the Revds. J. Dixon Clark, Wm. Darnell, Thomas Leishman, Geo. Walker, Robert Jones, Robert Green; and as visitors, Mr. Darling, Dr. M'Kenzie and Dr. Douglas of Kelso, Mr. Heckford, Curator of the Kelso Museum, and Mr. J. A. H. Murray, Secretary of the Hawick Archæological Society.

After breakfast, and before proceeding on our walk, an able paper by Mr Stuart of Edinburgh was read, 'On Kelso Abbey, Roxburgh Castle, and other antiquities of the neighbourhood;' and the information contained in this paper prepared the minds of the members to view with a deeper interest the scenes visited during the day. Through the kindness of Mr. Stuart, there was shown to the meeting, a facsimile of the Charter granted by Malcolm IV. to the Abbey, the original of which had been written in its Scriptorium.

The caligraphy was remarkably accurate and beautiful ; but it was especially interesting, from having the first letter M. illuminated with two miniature portraits—one of Malcolm, and the other of his grandfather David, the founder of the Abbey.

The party afterwards proceeded to the grand old Abbey, which, with its projecting corner towers, has some features of a baronial castle added to a christian church. The magnificent proportions and beautiful ornaments of this impressive structure were much admired ; and it was considered one of the happiest examples of transitional Romanesque architecture ; for here the massive and sombre characters of the Norman style are in parts relieved and enlivened by the light piers and elegant capitals, which give grace and beauty to early English architecture. The rich ornamentation of the Norman porch, and the interlacing arcades, which are supposed to have been the origin of the pointed Gothic, were particularly noticed.

After going through the well-kept garden adjoining the Abbey, in which several sculptured Abbey stones are preserved, the party visited the Kelso Museum, which contains a valuable and varied collection of objects in natural history and antiquities. All were pleased with their excellent preservation and orderly arrangement, which reflect great credit on the skill and attention of Mr. Heckford the curator. It was gratifying to notice, that local natural history and antiquities, which are often neglected while foreign objects are assiduously collected, find a place in the Kelso Museum. There are several celts, hammers, and weapons of the stone and bronze periods, which have been obtained from the district ; and there are a good Herbarium of Berwickshire, presented by the late Dr. Johnston, and an interesting collection of Roxburghshire ferns. Some disappointment however was felt, because no examples of the rocks and fossils of the district were to be seen, as these with no great labour might be obtained, and would form an instructive department of the Museum.

From the Museum the party proceeded to the Floors grounds and palace, to which free access was given through the courtesy of the Duke of Roxburgh. The party strolled through the parks and enjoyed the beautiful scenery; they entered some of the apartments of the castle, and went through the extensive conservatories. The changes in the level of the Tweed formed a special subject of observation. The north bank, on which the house stands, is formed of water worn gravel, and is considerably above the present channel of the river, and at some distance from it. Looking down from it towards the river, two other terraces are traceable, and furnish evidence confirming the views, some time ago expressed by our president, that the river had at former periods flowed at levels much higher than it does at present.

Passing from the Floors to the river, a cursory glance was given at the rocks which are there exposed; they belong to the Tuedian or lowermost group of the carboniferous formation, and consist of the shales, impure limestones, and sandstones peculiar to the group, and contain Entomostraca and fish remains, among which are scales of *Holoptychius Hibernitii*. Here the party crossed the river and climbed the steep hill on which stood Roxburgh Castle. Occupying the angle formed by the junction of the Tweed and Teviot, it was a place of great strength, and the masses of ruins yet remaining attest the greatness and strength of this renowned border fortress. Many scenes of richness and beauty courted admiration in the course of our ramble, but none was fairer and more pleasing than the view up the Teviot from Roxburgh Castle hill.

Leaving this spot, the party wended their way over the site of Old Roxburgh, which in the time of David I. was one of "the four great burghs," but is now entirely covered with green sward. On the higher ground, among a group of trees, some sculptured sepulchral stones, recently dug out of the ruins of the Old Town, were examined. At a distant period they had stood as memorials in one of the ancient chapels of Roxburgh. Of these relics an account may be expected from

Mr. Murray, the Secretary of the Hawick Archæological Society.

After dinner, the minutes of last meeting were read, and the Rev. Edward Wilkinson, of Bambro, and Dr. Robert Clay, now at Chatham, were elected members; and the following were nominated for membership, viz.—Mr. G. J. Williamson, Thames Street, London, Mr. J. A. H. Murray, Hawick, Dr. Chas. Douglas, Kelso, Dr. John Mackenzie, Kelso, Mr. James Patterson, Berwick, and Professor Campbell Swinton, Kimmergham, Dunse.

A letter from Dr. Thomson, of London, one of the oldest members of the club, was read, suggesting that daily meteorological observations should be made at Berwick, which is about the centre of the district embraced by the club; the meeting fully appreciated the value of the suggestion, and finding on enquiry that such observations are now regularly made with proper instruments at Berwick, Mr. Robert Home was requested to give the subject his attention, with the view of procuring an annual record for publication in our transactions.

The peculiar and almost unique wild cattle of Chillingham were brought under the consideration of the meeting, in consequence of Mr. C. Darwin, the celebrated naturalist, having made enquiry respecting their rate of increase, in order to compare their history with that of the wild cattle of the Falkland Islands and South America. Statistical information regarding them is at present however not sufficiently exact for scientific purposes. It was thought that if a proper record were kept of their births, sexes, deaths, causes of death, and of the calves born (if any) differing from the normal type, with a brief description of such differences, there would be obtained, in the course of about a dozen years, information which would be interesting both to the naturalist and agriculturalist. Mr. Tate was therefore authorized to bring this subject before the attention of the Earl of Tankerville.

The Rev. J. D. Clark reported that *Strix passerina*—the Little Owl—had been caught at Spittleford, near Embleton;

it was a female, and full of eggs. This is a rare bird in England.

My own ramble in connection with the meeting was extended as far as Jedburgh, chiefly that I might see the venerable Abbey there, and examine the section of Cambro-silurian and old red sandstone rocks on the Jed, which the descriptions of Hutton, our president, and others have rendered classical. But I refer to this ramble, that I may note an archæological discovery; for in Jedburgh, among some rocks in possession of Mr. Matthewson, I observed an inscribed stone, with sculpturing, of the same character as those on the rocks at Old Bewick and Routing Linn. These peculiar inscriptions were noticed in 1825 by Mr. J. C. Langlands, and a paper was read respecting them by the Rev. W. Greenwell, at the meeting of the Archæological Society, held in Newcastle, in 1852; but descriptions of them were first published in our Transactions, in 1853, and in Dr. Johnston's *Natural History of the Eastern Borders*. Since then several other similar stones have been discovered on the Dodding-ton moors, at Chatton, on Whitsunbank, near Rothbury, and as far south as the parish of Stamfordham. The discovery at Jedburgh is interesting, as extending the range in another direction; and as one of the same stones occurs in Kirkcudbrightshire, they may be found to be generally distributed over the south of Scotland."

In these minutes, our Secretary takes notice, that there was a large assemblage of members. The fact is easily accounted for. It was the first Field meeting of the year, after the interval of the winter, when no excursions are attempted, and members were glad that the season had returned for their rambles amidst the attractions of rural scenery. Our first meeting was in May, the month in which, of all others, the fields are clothed in their brightest green; when every rocky dell or sunny bank is gay with yellow primroses, and the woods are astir with the industry and melody of the feathered tribe. No wonder, then, that the members assembled in numbers, and came forth with joyous spirits, eager

to follow their respective favourite pursuits. The Botanist with his tin box slung from his shoulder—the Geologist with his hammer and leather bag—the Entomologist with his little insect net—the Antiquarian with his sketch book,—all these the working bees of our hive were there, and many others besides, who though not themselves devoted to any of the special objects of our club, liked to hear these objects discussed, and stroll with those who could illustrate them as opportunity offered. It was interesting to see, that though the party during our day's excursion consisted of little knots, each following a separate subject of research, there was amongst us all a family sympathy, a sort of brotherhood, which sprung from all having the same end in view,—the study of nature, and a search after truth; from all using for that end the same means,—the exercise of their bodily senses and mental powers;—and from all having their hearts open to be impressed by the beauties and wonders of creation.

The minutes mention how the party after viewing the Abbey and the Museum, walked through the noble park and gardens of Floors. Every one admired the stately beech, elm, and chesnut trees, through which the avenue winds; and regretted to notice the serious injury done by the frosts of last Christmas and of the first week in May, to a number of ornamental shrubs, such as the Portugal Laurel, the *Cryptomeria*, *Pinus Deodora* and *insignis*, and even to the common Yew and Holly. These observations led to some remarks on similar injuries to vegetation elsewhere, and to the degree of cold which produced them. It was stated that along the banks of the Tweed, the destruction of ornamental plants and shrubs had been much more complete than in the higher parts of the country:—that whilst at Stichel, Newton Don, Caldra, Dunse Castle, and Manderston, places from 300 to 400 feet above the sea, the Portugal laurels were scarcely affected, those in Springwood Park, Kelso Nursery Gardens, Lees, Milne Graden, Norham, and Paxton, were killed to the ground. It was also mentioned, that at these higher places during

Christmas week, the thermometer was about 2° or 3° below zero, at places in the valley of the Tweed, it sank to 7° or 8° degrees below zero. It was commonly supposed that the dampness of places near water, was the cause of greater damage there to vegetation ;—but from the above observations and others elsewhere, it appears, that places at low levels are always marked by greater cold in winter. Whether dampness also contributes to the effect, has not been ascertained by any accurate observations ;—and some doubt is thrown upon the supposition, by the fact, that at Dunse Castle, the Portugal laurels close to the lake there, were not affected. That low places in winter should be colder than those in the same district, at a higher level, within certain limits, follows from the principle, that as air becomes colder it becomes heavier, and therefore flows to low situations.

I took notice of a circumstance, during the cold of last Christmas, which I may be allowed to mention here, for the sake of recording it, that the Tweed at Milne Graden was frozen over, with ice from 9 to 10 inches thick, and that fully three weeks elapsed before it broke up. In the body of the ice, I observed a number of extraneous articles, such as weeds which had grown at the bottom of the river, pebbles about the size of walnuts, and a fresh water mussel, with both shells entire, and the animal alive. At this place the river is about 12 feet deep, and at first I felt some difficulty in accounting for the phenomenon. It must have been caused, as it appears to me, by the ice being formed at the bottom of the river. The upper surface of the water would of course first be cooled down to the freezing point, and by intermixture, the whole body of water below, would gradually be cooled also. Now ice would first form, in such circumstances, at the bottom, among stones, weeds, and other objects, which besides obstructing the movement of the water, would serve as *nuclei* for crystallization. But ice being lighter than water,—the ice when it had accumulated in a sufficient quantity, would become buoyant, and rise, carrying up with it small pebbles and other bodies at the bottom to which it had attached itself.

The Secretary in the minutes of this Kelso meeting, has taken notice of the old terraces, which are so well seen in Floors park, and on one of which the castle stands; mentioning that they are confirmatory of the views some time ago expressed by myself, that the river Tweed had formerly flowed at levels much higher than at present. I may be allowed here to explain, that I conceive there is evidence of a lake having once existed in this part, the north bank of which is indicated by the steep cliff, (about 60 feet above the river,) running not only through Floors park, but also along the north side of the town of Kelso, under the race course, and reaching the river at the toll near Henderside park. At this last mentioned place, the lake probably had its outlet. Gradually, the channel for the outlet wore down, and the lake then became drained. If these views be correct, Roxburgh castle is on a tongue of land which originally projected into the lake.

I may add, that there appear evidences of a similar lake, in a lower part of the Tweed,—viz., between Wark Castle and Coldstream Bridge, at which last mentioned place it discharged itself. Both the north and the south banks of this lake are indicated by a cliff about 40 feet high, the base of which is from 20 to 30 feet above the river. There are cuts in this cliff, through which small streams had flowed into the lake, and in some instances, the deltas of these streams are still discernible at the foot of the cliff. On the southern cliffs, a terrace occurs at several places, about two thirds from the top of the cliff, which seems to indicate, that the lake had stood at that level long enough to allow of the formation of a beach. I would invite attention to two large angular boulders of clinkstone porphyry, lying close beside each other, near the base of the south cliff. They have apparently formed originally one block, which had weighed above four tons. This boulder, being not at all rounded, could not have travelled far; and we know that the same rock occurs *in situ* among the Cheviots, about six or seven miles to the S. W.

I may here mention, that another boulder, still more interesting, is situated a few hundred yards below Coldstream Bridge, on the north side of the bank of the Tweed. Judging from its dimensions and quality, it must weigh above 12 tons. It consists of chert limestone, of a cream or grey colour. The field in which it lies is called from it, the Grey stone field.* Limestone of exactly the same description occurs *in situ*, near Carham, about six miles to the westward.

It is a question of much difficulty, to explain by what means these large boulders have been transported. That the natural agents now existing in the district, are quite inadequate, is evident.

I conceive that Millfield plain is in like manner the bottom of an ancient lake. The beach or bank, about 40 feet high, is very conspicuous near the turnpike road at Wooler Cottage.†

On the river Eye also, above Ayton, there has been a lake, the banks of which are plainly discernible on both sides of the valley near the village of Reston; to the east of this village, two successive sinkings of the lake are indicated by terraces on the south bank. At all these places, there are extensive flats, formed by the sediment which has been brought down by the rivers, consisting of fine gravel, mud, and sand,—and with which the valleys have been filled up.

Reference is made in the minutes to Roxburgh castle, the ruins of which were visited during the course of the day. Considering the original extent of the walls, and their immense thickness, it is surprising that so few fragments should

* This large Boulder in former days was an object of popular mystery and reverence. It was resorted to on the occasion of the celebration of Border marriages. The couple, having proceeded with their respective friends to the stone, the bride and bridegroom, stretched across it, and joined hands. The friends then declared the compact formed.

† In confirmation of the opinion, that Millfield Plain was formerly the bottom of a lake, I may mention what Sir Horace St. Paul, the proprietor, recently stated to me, that at the brick-work of Ewart Park, the depth of the clay exceeds 70 feet. The clay is very free from stones, and consists of sediment evidently deposited in still water.

be extant. Still more striking is the complete obliteration of the town, which was situated on the flat ground, east of the castle. In illustration of the remark made in the minutes of our meeting, that it was one of the four great burghs of Scotland, in the time of King David I. and his immediate successors, it is enough to mention, that though protected by the castle of Roxburgh, the town was also well fortified by a wall and ditch ;—that it carried on considerable trade and commerce ;—that it had in it several places of worship, a number of schools, and an hospital. It was governed by a provost, aldermen, and baillies. When we remember that at this place the Scottish kings held their courts ; that here, parliaments and councils were assembled, a mint for coinage established, and foreign legates received, how striking is the change of scene ! The ivy clustering over the ruined walls of the castle,—the trees growing in its once capacious court yards,—the green sward covering the site of the ancient town,—what an emblem is presented of the fall of dynasties, and the evanescence of earthly power !

Linhope Meeting.—“The third Field meeting of the year was held at Linhope, among the Cheviot Hills, on the 27th of June. Notwithstanding the unfavourable state of the weather in the morning, a considerable party assembled at breakfast at the Powburn Inn, and in the course of the day several other members arrived at the principal place of meeting. There were present—the President, Messrs. Carr, Dand, Huggup, F. R. Wilson, Langlands, Geo. Tate, Wm. Boyd, the Revds. J. D. Clarke, Darnell, Simpson, Chas. Thorp, Rook, Green, Tyler, Dunn ; and as visitors, the Revds. P. G. M'Douall, Robert Goodenough, W. J. Cooley, Wm. Greenwell of Durham, and Messrs. MacLauchlan, Coulson, Colville of Yetlington, and Thomas Tate.

After breakfast the ordinary business of the club was transacted, and the members proposed at the last meeting were elected. The following nominations for membership were made and seconded, viz.,—Rev. Patrick G. M'Douall, Kirknewton ; Mr. Henry Dand, Togston ; Mr. Thomas Brewis,

Eshot; Mr. Wm. Lowrey, Barmoor; Rev. W. J. Cooley, Rennington; Rev. Robert Henniker, Charlton; Rev. Wm. Greenwell, Durham.

Mr. Dand exhibited some well formed flint arrow heads, which had been found in the land near to Hauxley; and this led to a conversation on the stone implements and weapons used by primeval races, especially with reference to the implements and weapons, which had been found associated with extinct animals in undisturbed gravel deposits in the valley of the Somme in France.

The rain fell heavily during the forenoon, and masses of clouds hung about the hills; and at one time it seemed doubtful, whether a visit to Greaves Ash, the chief object of the meeting, could be accomplished. Despite however of unfavourable appearances, it was determined to proceed onward, and brakes, gigs, and horses were brought out, to convey the party, as far as practicable, up the rocky valley of the Breamish. As they went onward, various objects of interest were noticed. The Roman road,—‘the Devil’s Causeway,’—a branch from Watling Street, passes through the garden of the Powburn Inn, and on the hill overlooking it on the east is Crawley Tower, one of the oldest and most interesting of the Border peles, standing nearly in the middle of a well defined Roman camp. The ruined church and churchyard of Brandon lay a little to the north of our route, being one of three churches in the parish of Eglingham which have fallen into decay and been abandoned. Brandon hill is crested with a Celtic camp, near to which three leaf-shaped bronze swords were recently found. We passed through Ingram and cast a glance at its old church; but we were more struck with the marks of decay which were impressed on the village itself; for in former times it was a market town, and the base of the market cross still stands on the village green, and the foundations of numbers of ruined houses can be traced on the sides of the road and in the adjoining fields. The registers of the parish help us to estimate the extent of depopulation in recent times. We find that during eight years, from 1682 to 1689, there

were 76 persons, belonging to the parish, buried in Ingram churchyard, but during the same number of years, from 1853 to 1860, the number of burials of the same class of persons was only eleven; and therefore, after making an allowance for the longer duration of human life in our own times, it may be inferred, that Ingram parish was six-fold more populous in the seventeenth century than it is at the present period.

In these registers we find evidences of the operation of a statute passed in the reign of Charles II. for the encouragement of the woollen manufactures, and prevention of the exportation of money for the importing of linen, and enacting that no corpse should be buried in any shirt, sheet, shift, or shroud, or anything whatsoever made or mingled with flax, hemp, silk, hair, gold, or silver, other than what is made of sheep's wool only, on pain of £5. The following extract from the register illustrating this law is curious and interesting :—

‘February 6, 1682. Isabella Wright (the child of Geo. Wright of Reavely.)

‘An affidavit in writing under the hand and seale of Ann Robertson, that the abovesaid Isabella Wright was not wrapt up or buried in anything mingled with flax and other materiall but sheep's wool onely, as also a certificate under the hand of Arthur Eliott Clerke (before whom the said affidavit was made), were brought the day and yeare abovesaid.

AQUILINA FORSTER.’

Above Ingram the valley contracts, and the river flows between high hills—Brough Law on the south, and Reavely hill on the north. Though wanting the adornment of trees, save here and there an old thorn, there is much picturesque grandeur in this part of the valley—‘sublimity breathes from the form of the hills.’ The hill sides, though steep and broken with scars, are for the most part covered with a bright green vegetation; and here and there variety is given

to the scene by long trains of porphyry rocks which have, time after time, rolled down from the summit. The action of the elements has given to these rocks externally a violet bloom, which when illuminated by sunlight appears beautiful amid the green herbage. Locally these trains of rocks are called Glidders or Glitters, which with much probability has been derived from 'gleiten' to slide. Mr. Carr of Hedgeley pointed out horizontal ridges in several places on the hill sides considerably above the level of cultivation at the present period being probably the remains of a very ancient husbandry. Two distinct river terraces or haughs were noticed lower down in the valley, proving that the Breamish had formerly flowed at elevations from 10 to 20 feet above its present channel.

Arrived at Greaves Ash, near to Linhope, the party commenced examining the extraordinary remains of the ancient British town and fortlet there. All were interested in observing the result of the excavations which have been in progress under the direction of the club, with the view of showing more of the character of the place, and if possible of throwing some light on a dark and distant period of our history. But of this structure a full account may be expected at the August meeting of the club. Some of the members extended their walk as far as Linhope Spout—a picturesque waterfall. Fortunately before the party arrived at Greaves Ash, the weather became favourable, and the party could with a high degree of pleasure ramble over the hills in the neighbourhood.

The observations made in natural history were not important. In the Powburn *Ranunculus aquatilis* was abundant, along with *Callitriche autumnalis*, *Callitriche verna*, and *Callitriche platycarpa*; *Teesdalia nudicaulis* and *Filago minima* were in the gravelly bed of the Breamish; and near the Linn the very pretty *Saxifraga stellaris*, *Polypodium Phegopteris* and *Dryopteris*, and *Cystopteris fragilis* were found. The porphyry rocks at Greaves Ash and on the banks of the Breamish are crusted over with lichens—none however of much rarity; the following have been determined,

Lecidea geographica and *polytropa*, *Lecanora glaucoma*, *Squamaria saxicola*, and *Spærophoron coralloides*.

The members were reunited when the hour for dinner came. A large tent had, by the kindness of Mr. Colville of Yetlington, been erected within the walls of the old Celtic town; and herein the party enjoyed a substantial dinner, which had been brought up from Powburn.

Large though the party was who assembled in this wild region, yet if the morning had been favourable, a still larger number would have been present. Five or six members attempted to reach Linhope from the Scotch side of the Border by crossing the Cheviot; but after proceeding nearly as far as its summit, they were reluctantly compelled to retrace their steps on account of the boggy ground being impassable by horses.

After dinner there was exhibited a very perfect small silver cross recently found at Hartside, on the Breamish, bearing on one side the letters *Alpha* and *Omega*, and on the other side, the inscription which is by some persons read AGLA, and by others AGCA."

The object of our meeting at LINHOPE among the Cheviot hills, was, as the minutes show, mainly archæological. Whilst the exploration and examination of the old British town of Greaves Ash, was the matter of greatest interest, several other spots were pointed out by our Secretary as throwing light on the early history of the district. The old Roman road and camp near Crawley,—the remains of the ancient town of Ingram,—and several British camps on the hill tops, all excited notice and led to instructive conversation. Operations had been going on for several weeks previous to our visit, in order to clear out the dwellings in the ancient town near Linhope;—for which purpose, workpeople had been employed to remove the rubbish and turf which had accumulated over the buildings. Such an undertaking was new to the club;—as in the department of archæology, its operations had previously been limited to the receiving of papers reporting on relics found, and the publishing of these in our trans-

actions. But it was a much more important step for the club itself to enter on attempts at exploration and discovery. These vestiges of primæval humanity cannot be too highly estimated. They belong to a period anterior to all written history; so that if we desire to know anything of the races who inhabited our country, at that early epoch, we must endeavour to decipher the traces which they have left of themselves in their habitations and sepulchral monuments. It is scarcely necessary to remark with what interest the members present examined this ancient town in all its details;—the massive unhewn masonry,—the peculiar forms of the dwellings,—the structure of the floors,—the positions of the doors,—and the thick walls with mysterious cells in them. If any further proof were needed to show the general sense of the club as to the importance of these explorations, it would be the large attendance of members, who, to witness the operations in progress, had come to a remote spot among barren hills, having for that purpose left their homes at an early hour, and in weather anything but propitious. I would only add, how much we all felt that we were indebted to our Secretary for watching the excavations, and for laying before us, as he did at our Alnwick meeting, a most interesting report detailing what had been done and discovered.

One of the things found at Linhope was a broken Quern, which indicates that corn was a part of the food of the inhabitants, and suggested the inquiry, where was the corn grown, and what were the means of culture? This inquiry seems to be answered by certain marks of a very rude husbandry on the sides of the hills in this neighbourhood, to which Mr. Carr first drew attention. Some of these marks have the appearance of horizontal shelves. In the circular sent round to members, intimating the Linhope meeting, and specifying some of the objects worthy of attention, these shelves are taken notice of as ‘marked terraces, apparently formed by the action of water,’—a theory which was undoubtedly commonly entertained. Having some experience of the phenomena of ancient water terraces and raised beaches, I went

with another member of the club, to examine these shelves, at several places between Linhope and Ingram. My friend and I satisfied ourselves that they were not terraces formed by water, inasmuch as though some of them were horizontal, others ran obliquely round the hills, and in several instances they coincided with the slope, forming in this last case wide ridges with deep trenches between. I came to the conclusion, that these appearances indicated the operations of husbandry,—carried on at some very remote period. It will be observed, that if corn was to be grown in this district, the most suitable spots would be not in the valleys, then covered with woods and liable to river floods, but on the hill sides, which were free from trees, and at all events more easily cleared ; and where the soil, consisting in great part of decomposed porphyry, must have been peculiarly fertile. These spots had also the advantage of being dry ; and it appeared to me, that in order to prevent the water running away the soil, the ground had been formed into broad terraces more or less horizontal, a practice common at this time on the hill sides of France and Germany for the culture of vines and garden crops. In some of the hills, as I have stated, the ridges and furrows slope down the hill. At these places we observed, from the immense quantity of rushes and other aquatic plants, that the ground was full of natural springs ; and if it was intended to keep the soil free from water, the mode adopted certainly was the best for the purpose.

On mentioning these views to my friend the Rev. Mr. Baird, minister of Yetholm—one of our original members—he informed me, that at several places in his parish there are similar terraces more or less horizontal, along the sides of the hills. His theory in regard to their origin, however, is different from the one just suggested. He states that these terraces occur only where they are visible from places on the hill tops, on which he believes Druidical worship to have been carried on ; and his opinion is that these terraces were made and used for the purpose of enabling the inhabitants of the district to come together and witness the ceremonies performed

by the priests on these hills. The theory is ingenious, and invests the terraces with even a greater mystery than has hitherto attached to them. But I am not inclined to agree with Mr. Baird. His remark that the terraces in his neighbourhood are always visible from some adjoining hill top, suggests that this arrangement may have been adopted for the sake of safety to crops growing on the terraces, as most probably on these hills there would be persons watching the district in camps or fortlets. To investigate this subject further, it occurs to me, that it would be desirable to have a small committee appointed to make a special report to the club. After hearing the report, a visit could be paid to some of the more remarkable of these terraces. I have heard that at a place called Hethpool, on the Colledge river, they are very striking. They occur also in other parts of the country, for Professor Simpson, in that most instructive address which he delivered last year, as president of the Antiquarian Society of Scotland, asks, "Who fashioned the terraces at Newlands in Tweeddale? and what was the origin of the many hill-side terraces scattered over the country?" On this testimony to the interest attaching to these terraces, I feel the less hesitation in recommending the subject to the special consideration of the club.

Grants House Meeting.—"The third Field meeting for the year 1861, was held on the 25th of July, at Grants House, a place always visited with renewed interest, as it was the birth-place of the club. The Botany and Zoology had on former occasions been carefully observed; and therefore the chief objects of this meeting were to examine Edin's Hall and the geology of Cockburnlaw. A very wet morning was but a bad augury for the meeting, and deterred several members from attending. There were present, however—the President, the Rev. Geo. Rooke, Mr. Home of Berwick, Messrs. Turnbull, John Boyd, Wm. Stevenson, Robert Douglas, J. Patterson, D. Macbeath, Chas. Watson, Dr. Stuart, Dr. Hood, Mr. Geo. Tate, Mr. Carr of Hedgeley; and as visitors, Mr. Landale of Temple Hall, Mr. Waite of Dunse, and Mr. Hardy of Penmanshiel.

After breakfast, the party proceeded over the bleak Lammermuirs to Abbey St. Bathans, where they enjoyed the hospitality of Mr. Turnbull ; and afterwards went along the banks of the Whiteadder to Edin's Hall, which stands on elevated ground on the north-east side of Cockburnlaw. This, one of the most remarkable antiquities in the south of Scotland, was examined with great interest. It has been well described, in our Transactions, by the late Mr. Turnbull of Abbey St. Bathans. Much regret was expressed on account of the dilapidations it has suffered, even during the last few years, and it was proposed to make an effort not only to have the ruin protected from further destruction, but to clear it out, so as more fully to shew its age and character.

Leaving this interesting memorial of the past, the party ascended Cockburnlaw ; and as we passed along, the President and Mr. Stevenson directed attention to the character of the rocks forming the hill. Arrived at the summit, which commands a magnificent view over the Merse and the Lammermuir hills, the President gave an instructive exposition of the geology of the district.

Our examinations and discussions in the field were so prolonged, that the party had to hasten back to a late dinner at Grants House. The members proposed at last meeting were elected ; and the following nominations were made :—David Hope, M.D., Ayton ; Mr. John Waite, Dunse ; Mr. Edward Hargett, 56, Queen's Street, Edinburgh ; Mr. John Allen, Baillie Mains, Chirnside ; Mr. Richard Hodgson, M.P., Carham Hall ; Sir Horace St. Paul, Bart., Ewart Park ; Major Hope Smith, Cruicksfield ; Captain M'Laren, Coldstream ; Sir George Douglas, Bart., of Springwood Park.

An account was given by the President of some curious caves which had, not long ago, been discovered on the banks of the Oxnam near Crailing ; and an able and learned paper by Mr. Hardy, on the history of the Wolf in Scotland, was read."

The chief object of attraction, on this occasion, as the minute shows, was that old structure on the N.E. side of

Cockburnlaw, near Dunse, known by the various names of Edin's Hall, Wooden's Hall, or Eetin's Hald. This curious relic of a by-gone age, has long been an object of mystery among the inhabitants of the district, and of interest to antiquarians. It has given rise to a legend handed down from one generation to another, that it was once the residence of a giant; the particulars of which, Dr. Hood of Maines, has at my request embodied in a letter which I shall lay before the club. The place was described in the year 1764, by a writer in the Scots Magazine; next by Chalmers in his Caledonia; and also in the two editions of the Statistical account of Scotland. The most accurate description, however, was given in the year 1850, by the late Mr. Turnbull, of Abbey St. Bathans, one of our members, and whose paper was published in our transactions. The place had been visited by our club a few years ago, and probably most of the members had, like myself, made pilgrimages to it on other occasions. The fact of our club having resolved to pay a second visit, and that so many members assembled, indicated pretty plainly a conviction, that the subject was not exhausted—that the riddle of the origin and object of the edifice had not been solved. How true it is, that—

“ There is a power
And magic in the ruined battlement,
For which the palace of the present hour
Must yield its pomp, till ages are its dower !”

Mr. Turnbull considered this structure to have been a palace of Edwin, king of Northumbria, who lived about the year 620, and whose kingdom then embraced Berwickshire—relying for that view a good deal on one of its names, Edin's Hall. Mr. R. Chambers, who is no inconsiderable authority in such matters, disputes this theory, and considers that the name is more properly Eetin's Hald,—according to the testimony of old inhabitants; and as Eetin is an old Scotch word for a giant or monster who had an insatiable appetite for red or raw flesh, Mr. Chambers' view received

considerable support from the legend to which I have just referred.*

It is perhaps premature to be speculating on the origin of the building before all its parts have been accurately examined and described, and until every source of information as to its original shape and dimensions has been exhausted. There are two features in the building which are very peculiar—viz., *cells* in the middle of the thick wall surrounding the central building;—and square *holes* in the interior court. On the occasion of our visit, a gentleman was present, who said that he remembered visiting the place about the year 1811, and at that time, the thick wall was about eight or ten feet high, and that two of the cells in the wall were covered at the top by one stone overlapping another. The square holes in the interior court, I see no notice taken of by Mr. Turnbull or any other writer.

Mr. R. Chambers in his paper suggested that if the interior court were trenched a few feet, there would probably be found weapons or other articles which had been left by the primitive occupants, and he strongly urged, that at all events an attempt should be made to clear the place of rubbish, and means taken to preserve with scrupulous care all that remained of this singular building. These views being participated in by those members of the club who visited the place last August, the subject was brought before the meeting of the club held shortly afterwards at Alnwick, when it was resolved to appoint a Committee to attend to the matter, and raise a special fund by subscriptions. It is to be hoped that such a Committee will do important service in not only preserving this curious and unique relic from further mutilation, but in ascertaining some additional information which will throw light on its origin.

Our Secretary in his minute of our meeting, mentions, that after we had examined this ancient structure, we ascended to

* Dr. Leyden says, "The red Etin is still a popular character in Scotland; and according to the vulgar etymology, his name is always represented as an insatiable gormandiser on red or raw flesh."

the top of Cockburnlaw, when an explanation was given by Mr. Stevenson of Dunse and myself of the geological formations which were in view from this elevated spot. I may here give the following outline of what can be seen. 1st. Cockburnlaw itself, in its highest portion consists of silurian or greywacke strata, considerably altered by heat. 2nd. The lower part of the hill, at least on its east side, and the adjoining hill of Stansheil consists of sienitic porphyry of a reddish colour. 3rd. The strata along the river Whiteadder at Cockburn Mill consist of old red sandstone, containing scales of the *Hyloptychius Nobilissimus*;—a fish which generally characterizes that formation. A little above Cockburn Mill, a very distinct junction of the two formations is seen,—the red horizontal strata lying over the upturned edges of the greywacke. 4th. Above these old red strata, lie what our Secretary has not improperly called the Tuedian formation, consisting of a series of blue marls and sandstones, which abound in Berwickshire, and dip under the Berwick coalfield. 5th. The low hills on the south, towards Dunse, consist of greenstone and basalt. 6th. The district especially to the south is overspread largely with boulders, gravel, and sand,—both boulders and gravel indicating, by the character of the rocks, that they have come from the westward.

Perhaps I may here mention, that at the late meeting of the British Association at Manchester, I gave an account of those remarkable deposits of gravel and sand, known in Berwickshire under the name of “The Kaims,” some of which can be distinguished from the top of Cockburnlaw. The best instances which I know of these kaims, are in the woods behind Dunse Castle, and on the moors north of Greenlaw. The account which I read at Manchester drew forth into discussion several experienced Irish geologists, who gave instances of similar ridges or embankments of gravel and sand, running continuously 15 miles or more across flat parts of Ireland. The unanimous opinion of those who joined in the discussion was, that all these deposits were formed before the land emerged from the sea. The theory which I had

suggested was, that they were formed, when the land was in the act of being elevated, the rush of waters which resulted, removing the detritus in most places, and leaving elongated banks in others. But the general opinion was adverse to this view. It was thought more probable, that they had been formed by the action of currents and tides before the land emerged, just as submarine banks or spits are now forming in our existing seas. The Kaims of Dunse Castle and Greenlaw, are at a height of about 750 feet above the sea.

Before concluding these comments suggested by our meeting at Cockburnlaw, I cannot forbear mentioning, how much the party enjoyed the ride over the moors, rough and jolting though it was. By the courtesy of farmers in the neighbourhood, two long carts had been provided, well padded with bags of clean straw,—each of which was drawn by a pair of beautiful horses, gaily caparisoned, and driven by steady well dressed ploughmen. Though our equipages were homely in character, they suited well the moorland roads, and they allowed us to have a better view of the landscape with its varied attractions. The heather was at the time in full bloom, diffusing its pleasant fragrance over the hills. Ivy clustered on the trees and precipices, sometimes hanging from them in graceful drapery. Lichens and mosses of various tribes, coated the grey boulders of whinstone. Ferns also were in profusion ;—some of minute and delicate forms pushing out from the crevices of old walls ;—others, more showy, with long arching fronds ;—and lastly the tall brachens, clothing the sandy knolls with their shining yellow stems and glossy foliage. What all of us admired most were the fox-gloves,*—both the white and the purple species, with their finger-shaped flowers, strung in rows as regularly as the beads of a necklace. In the shaded and sheltered dells, the slender stalks stood erect, and motionless :—in spots more exposed,

* Mr. Carr of Hedgeley, so well known to our members for his acquaintance with Saxon literature, informs me, that the true name of this plant, is Folks-Glove,—from the Saxon “*foles-glovas*,” meaning the gloves of the good folks, or fairies.

they ever and anon drooped their heads and lifted them again, or swung from side to side, as the wind blew them about. These beautiful plants, so well calculated to impress the heart with God's wisdom and beneficence, may well be likened—

To matin worshippers, who bending lowly
Before the rising sun, God's sleepless eye,
Send from their chalices a sweet and holy
Incense up on high ;
'Neath cluster'd boughs, each floral bell that swingeth
And tolls its perfume on the passing air,
Makes Sabbath in the fields, and ever ringeth
A call to prayer.

In contemplating the scenery of our route, much as we were struck with the variety of objects which made up the landscape,—hills, streams, rocky banks, gentle slopes, trees, wild plants and flowers,—we were I think quite as much impressed with the wonderful way in which these objects all blended and harmonized with one another. How impossible is it for man even with the highest skill in gardening, and with a full command of forms and colours, to accomplish similar results ! At Chatsworth, the princely seat of the Duke of Devonshire, the taste of Sir Joseph Paxton has been exhausted in attempting to produce an imitation of rural scenery, with which view, great boulders and huge pieces of rough rock have been collected, grouped together, clothed with flowers, ferns, and mosses, and enlivened with sparkling water-falls. But the eye accustomed to the truth and beauty of nature, soon detects the imposition ; and this part of the grounds on which so much expense and ingenuity have been lavished, excites surprise more than admiration.

In passing Akeyside, Dr. Hood of Maines pointed out to the party a patch of natural oak trees. It is a remnant of the forest which in former days covered a large part of the east of Berwickshire ; evidence of which is afforded by the names of many other places in the district,—as Houndwood, Greenwood, Swinewood, Brocklewood, Laixwood, Handaxwood, Harewood. It was one of the royal forests, in which the Scottish kings exercised their right of hunting, and for the

care of which a Forester was appointed, who had certain privileges bestowed on him. One of these privileges, as expressed in the royal charter, was "Meat and drink to the Forester and his man, and horse meat when he shall come to the house of the Lord Prior, (*i. e.* of Coldingham,) with a robe fit for a gentleman, to wear when he attends the said Lord Prior at Christmas yearly." A more substantial perquisite was given to the Forester, under the following clause, "A threave of oats from every husband land of the farms of the said lordship of Coldingham; for every waggon of wood, 4 pennies; for every horse draught, 1 penny; for every log of oak drawn with oxen, 4 pennies, and wood hens due according to custom." It happens that my wife inherits this office of Forester, so that she and I have no small interest in the privileges and perquisites belonging to it. Unfortunately, as there is no longer now a Lord Prior to attend upon at Christmas, we do not receive the annual present of a robe;—and as the forest also has ceased to exist, we do not receive the pennies payable for the various loads of trees which might be drawn away by horses and oxen. But we still continue to receive the threave of oats for many a husband land in the lordship. I may here mention, as a circumstance bearing on the state of agriculture in this part of Berwickshire in early times, that the proprietors in the neighbourhood of this great forest had a right of taking wood for what was called "harrow, barrow, soam and trolsie,"—harrow being the implement for cultivating their land,—barrow a vehicle for carrying articles,—soam the shafts, and trolsie some parts of the harness for oxen or horses. This information was given to me by the late Mr. Bishop of Restonhill, who had long lived in the east of Berwickshire and knew its traditions well.

Alnwick Meeting.—"A united meeting of the Berwickshire and Tyneside Naturalists' Clubs, was held at Alnwick, on the 29th of August, 1861. The wish to cultivate good fellowship among the members of the two clubs, and the liberal grant of the Duke of Northumberland, in throwing

open his castle, museums and grounds to the meeting, brought together an unusually large assemblage. Upwards of 40 members and visitors connected with this club were present.

The ordinary business of the club was transacted after breakfast. His Grace the Duke of Northumberland, on the proposition of the president, was elected a member of the club. The members proposed at the last meeting were elected; and the following nominations were made, viz.:—Mr. Wm. Cunningham, Coldstream; Mr. Thos. Fryer, Grindon Ridge; Mr. Wm. Wightman, Wooler; Rev. Court Granville, Alnwick; Mr. Thos. Landale, Temple Hall, Coldingham; Mr. Robert Oliver, Lockside, Yetholm; Mr. Wm. Dallas, York.

The dilapidated condition of Edin's Hall, in Berwickshire, was brought before the meeting, and it was resolved, that an effort be made to have this interesting antiquity cleared out and protected, and that the owner be requested to grant permission to the club for these objects. A circular was adopted, addressed to the members and others interested in the examination and preservation of antiquities, asking subscriptions to defray the expenses of excavation and walling; and a committee, with Mr. Turnbull of Abbey St. Bathans, as convener, was appointed to superintend and report.

The party proceeded to Alnwick castle, and were conducted through this magnificent building, and had an opportunity of examining the extensive restorations recently made, and the splendid decorations of the interior. The museum of British antiquities was visited, where there are many instructive relics of the ancient British people, several Roman altars and sculptured stones, and a fine Saxon cross, taken from the ruined church of Alnmouth, and which has, besides sculptured figures, an inscription of a mixed Saxon and Runic character. His Grace received the party with great courtesy in his Egyptian museum, and very kindly gave an interesting exposition of the various antiquities there, illustrating the religion, history, and ordinary life of the Egyptians.

After leaving the castle, the party was divided into two; one went through Hulne Park, and examined, in their route,

the remains of Alnwick and Hulne Abbeys. Near to the Forest Lodge, they saw an ancient British cist or sepulchre which had recently been uncovered ; a fine urn now preserved in Alnwick castle, found in this grave, shows the burial to have been in the latter part of the Celtic period.

The other party took the route to Ratcheugh Crag, where the great basaltic "whin sill" is seen in two distinct strata or intruded masses, with beds of limestone and shale between them. The basalt is rudely columnar. The lower stratum or mass, is at the north part of the section, 80 feet in thickness, with a dip south-eastward ; but towards the south end of the section, it dwindles down to two feet in thickness, proving that it is not a regular continuous stratum, but a wedge-shaped mass intruded amongst the mountain limestone beds ; and accordingly we find, that the heated igneous basalt has metamorphosed the shale below into porcelain jasper, and the limestone above into crystalline marble. This basalt ranges through the county from Kyloe Crags on the north, to Glenwhelt on the south ; its relative position among the limestone strata is not the same throughout its course ; for in one part a well-recognised limestone sill is immediately above it, and in other parts, many fathoms below it.

All were re-united at dinner, the president of this—the senior club—occupying the chair, and Dr. Johnston—president of the Tyneside club—officiating as vice-chairman. After papers had been read by members of the Tyneside Club, a report was read by Mr. Tate on the remains of an old Celtic town on Greaves Ash, near Linhope, with an account of excavations made there and in similar structures in the valley of the Breamish. Mr. Wm. Boyd read notes of plants and insects observed, new to the district. Mr. Williamson gave an account of oyster and mussel beds, now being artificially formed at Alnmouth for the benefit of the fishermen, at the expense of his Grace the Duke of Northumberland.

The members of both clubs, in a kindly spirit, freely mingled with each other ; and it is hoped the effect will be

to strengthen both bodies and promote friendly coöperation in carrying on their common objects."

Our meeting at ALNWICK was signalized by the opportunity there afforded to us, of social intercourse with the Tyneside Natural History Club—a club having objects similar to ours, and which I believe was originated by some of our own members resident in Northumberland.

It afforded I am sure, great pleasure to members of both clubs to have this opportunity. New acquaintances were thereby formed, between persons of congenial tastes and similar pursuits. Useful information and good hints were interchanged, and above all, encouragement was given in the pursuit of our common objects by the mere presence of so large a staff of persons devoted to them. I trust that the precedent set at Alnwick will be followed, so that one of our summer meetings may always be held at some place where another club like our own, may unite with us for the day's proceedings.

In the minutes of this meeting, notice is most properly taken of the liberality and courtesy of the Duke of Northumberland, in not only throwing open to the members of both clubs, his splendid old castle, and its park and gardens, but in himself condescending to meet the members in his Egyptian Museum, and there give an address to a numerous audience on the objects there preserved, most of which had been collected by him when in Egypt. On the conclusion of this address, I took it upon me, as president of the senior club,—at the suggestion of some of our members,—to return thanks to his Grace, and to inform him that our club, as the only acknowledgment which it had power to offer for his kindness and patronage, had that morning suspended its rules in regard to the admission of new members, in order that we might have the privilege and honour of electing him a member of the club. His Grace was pleased to say that he was much gratified by the compliment we had paid to him, and was very happy to have become a member of the Berwickshire Naturalists' Club.

After dinner an interesting communication was made by Mr. Williamson, in regard to the operations which he was carrying on at the mouth of the river Aln, for forming mussel beds. The object is to supply bait to the fishermen along that part of the coast. Mr. Williamson mentioned, that on the employment of the Duke of Norfolk, on the coast of Sussex, he had succeeded in multiplying not only mussels but oysters, and he had little doubt of the possibility of doing so on any part of the coast, where the sea bottom was suitable. Knowing as I do the great difficulty which has been for some years experienced by the fishermen of Berwickshire and East Lothian in procuring bait,—for which they are actually obliged now to go to the west coast of Scotland,—I expressed my sense of the great importance, in a national point of view, of Mr. Williamson's operations, and requested that he would furnish me with a written statement of his operations, that I might bring them under the notice of the Scotch Fishery Board.

I may add, that the formation of these mussel beds at the mouth of the Aln, affords an additional instance of the public spirit and the princely munificence of the Duke of Northumberland. He has supplied life-boats to a number of places along the rocky shores of the east coast ;—he has set up barometers on a very large size, to warn the fishermen of coming storms ;—and now he is forming mussel beds to enable these industrious classes to procure bait for carrying on their trade. Truly Northumberland should be thankful to have at its head a nobleman of such enlightened philanthropy.

Our minutes take notice of the excursion to Ratcheugh Crag, where a most interesting geological address was given, explanatory not only of the Crag itself with its basalt, limestone, and other strata, but also of the surrounding country. The modesty of our Secretary has prevented him mentioning that this geological exposition was given by him ; and as no member of the club is so well informed as he is in the principles of geology, or better acquainted with the district, it is scarcely necessary to add, that the exposition was most instructive.

The principal business after dinner was the reading of our Secretary's report on the explorations made on the ancient British town of Greaves Ash. As I have already adverted to this subject, I need only now observe, that the account given of the town, and of the discoveries which had been made in it, was most masterly, and that the conclusions come to by the author, were such as to draw forth from several members of great experience in antiquarian researches, both approbation and concurrence. If this report on Greaves Ash is published in our Transactions, as I hope it will be, it will I am sure be read with the greatest interest, and add much to the credit of our club.

Having no further comments to offer on any of the proceedings at our summer meetings, I shall offer a few communications of a miscellaneous nature, the result partly of my own observation, partly of that of others.

1. I bring before the club a letter addressed to me by Dr. Hood of Maines, relating the legend connected with Edin's or Etin's Hall on Cockburnlaw, to which I have already alluded. The legend supposes the place to have been occupied by a giant, some of whose exploits in carrying off sheep and cattle to be devoured by him, are recorded. The legend is interesting, as showing how all tradition of the true origin and use of the structure had been lost in a remote antiquity.

The same letter gives a short account of the old castle at Bunkle, and adverts to some historical events with which it is associated.

2. I bring before the club a letter addressed to me by Captain Maclaren, of Coldstream, describing an ancient stone coffin, discovered some years ago in that town; which Captain Maclaren had preserved, and which is now in his possession.

Both of these letters were written at my request, considering as I did, that it was desirable to have a written record of the facts mentioned in them: and I take leave to say, that members might do much to forward the objects of the club, if whenever they hear of any facts of an interesting nature, they

would endeavour to procure a written memorandum of them however brief, to be recorded in our transactions.

3. I bring before the club a short report which I have drawn up of some caves on the estate of Mr. Paton of Crailing, in the county of Roxburgh, visited by our Secretary and myself a few weeks ago. These caves belong to the same class as the caves to which Professor Simpson refers in his address to the Scotch Antiquarian Society, when he asks, "What is the age of the rock caves of Ancrum, Hawthornden, &c., and were they primarily used as human habitations?" To that enquiry of the President of the Antiquarian Society, I think my report on the Crailing caves furnishes an answer.

4. I bring before the club another short notice of an old Border camp on my property at Milne Graden, and situated on the north bank of the river Tweed. In various parts of the Tweed, and especially where the river was fordable, such camps existed. It seems to me desirable to preserve some record of them.

In conclusion, I beg to offer for the consideration of the meeting a few remarks, bearing not so much on the objects of the club, as on its constitution and management.

1st. We have to thank the managers of the North Eastern and North British railway companies for the liberal manner in which they allow the members of our club to travel to and from our places of meeting. They grant to us a privilege which no other persons receive, of return tickets at one fare and a sixth, available for two days. Were it not for the railway, it would be impossible for us to hold meetings over so large an area of country, as that which the club embraces; and when members attending these meetings are enabled to travel for little more than half of the expense charged to the general public, the club feels, and they have authorized me as their President to say, that we are much indebted to the managers of the railways for their liberality.

2nd. We consider also, that it would be a respectful and becoming act on the part of our club formally to thank Lord Ravensworth, the Duke of Roxburgh, and the Duke of

Northumberland, for so courteously throwing open their splendid mansions, gardens, museums, and policies for the inspection of the members of our club. The rare and costly nature of the property at these princely places, enhances the value of the privilege which was accorded to us, and which I am sure was thoroughly appreciated by every member who availed himself of it.

3rd. Would it not be a great advantage were ladies to be admitted as ordinary members of the club? At our Alnwick meeting, we had the pleasure of seeing several ladies, at breakfast and at dinner, as well as during the excursions of the day, taking especial interest in our proceedings. When at Manchester a few weeks ago, attending the meeting of the British Association, I was struck with the fact, that at every one of the sections, even during the driest scientific discussions, ladies formed a large proportion of the audience, and at one of the sections a paper was read, of which a lady was the author. The soirées showed the ladies to form always a decided majority. One of these evening meetings was at the invitation and under the auspices of the Manchester Field Naturalists' Club, a society which devotes itself to the pursuit chiefly of Botany and Entomology. This society by its rules allows ladies to join it as ordinary members; and it appears that about one fourth of its whole members consists of ladies,—the wives, sisters, or daughters of the gentlemen members of the club. Now I do not suppose that the tastes and qualifications of the Lancashire ladies as members of a naturalist club, are superior to those in our own Border district. I know several ladies in my own county who would gladly join our club, on account of some of the objects which our club encourages. The claims of the fair sex to coöperate with us in these objects, our club has already so far recognised, as to have admitted three ladies to be *Honorary* members, and received from them communications, which have been published in our transactions. I suggest that the club should go only one step further, and admit ladies to become *ordinary* members. I feel assured that the popularity and

efficiency of our club would be greatly promoted by such a measure.

4th. Is it not right that considering the great change which has taken place since the formation of the club, in its objects, and in its sphere of operation, some change should be made in its name? The title of the *Berwickshire Naturalists' club*, is no longer suitable to its present condition; for we cultivate many other branches besides natural history,—antiquities, geology, meteorology, and chemistry; and we do not confine our meetings to Berwickshire. Looking therefore to what our club actually is and does, our name is not quite consistent with truth; and what is more, it is prejudicial to the club, because persons residing beyond Berwickshire might wish to join us, who refrain from doing so, thinking that the club is appropriated to that county;—and persons who care nothing for natural history, but who are fond of some of the other subjects to which we attend, also refrain from joining, supposing that we are solely a natural history club. To obviate this incongruity and these practical evils, I would respectfully suggest the adoption of some more general name, such as the Eastern Border Society.

In now retiring from the President's chair, allow me to congratulate you all on the continued prosperity and growing reputation of the club, and to express the great satisfaction and enjoyment, as well as the instruction and profit which I have received, in attending the meetings of the club during the past summer.

I have only further to announce that, in the exercise of the prerogative which belongs to the President, I hereby nominate as President of the club for next year, John Boyd, Esq., Cherrytrees, who is well known to all of us as long having been a zealous member of the club, and as being well acquainted with several branches of natural history.

KELSO.

By JOHN STUART, Sec. S.A. Scot., Edinburgh.

AMONG the earliest of those many religious foundations by which David, the first king of the Scots of that name, became so illustrious, was the Abbey of Selkirk. While yet only styling himself "David the earl, son of Malcolm king of the Scots," by a charter probably of the date 1113, he founded a monastery at Selkirk, in honor of St. Mary and St. John the Evangelist. Here he planted a colony of Benedictine monks from the Abbey of Tiron, and to this foundation he dedicated many lands and fishings both in Scotland and England. Whether the saintly David was drawn to place the Abbey in this spot by the memory of some earlier foundation, as was the case at Melrose, or whether it was merely to be near the castle in his forest of Selkirk, which he then occupied, cannot now be determined. But if we are to hold that Sele-Kirk means something like holy or happy church, it is not improbable that the early sanctity of the spot may have been a leading motive with David. We are at least certain that one early offshoot from Lindisfarne took root at Melrose in the same neighbourhood, while it seems probable that another Saxon "familia" was settled at Jedburgh, before the middle of the ninth century. We learn also from Venerable Bede, that the holy Cuthbert, after he became Prior of Melrose, was wont to traverse this district, preaching the gospel to the people in the villages and hill-sides, being absent from his monastery in these duties, oftentimes a week and sometimes even a month. We learn also from Reginald* the monk of Durham, who wrote about the middle of the twelfth century, that of the many churches founded in honor of S. Cuthbert, there was one on the Slitrig, a chapel of the mother church of Cavers, neighbouring with Hawick. Here various miracles were wrought by the Saint, of which Reginald got an account from Dolfin the parson and others—from one of which we gather the fact, that in the burial ground around the church there stood a stone with a cavity on its top, which was always filled with rain mixed with holy water. In Reginald's time, the stone walls of the building yet remained, but it had for

* Reginaldi Monach. Dunelm. Libell., p. 291.

long been without a roof, so that the foundation probably was an old one.*

But from whatever cause David was induced to fix on Sele-Kirk as the site of his monastery, it did not remain there beyond a few years; for in 1126, being two years after David's accession to the Scottish throne, he translated the monastery to Kelso, on the ground that the former situation had not

* It is not to be wondered at that the country on the banks of the Tweed and Teviot should have memorials of the sainted Cuthbert, to whose early labours the rude people who dwelt there and among the adjacent hills owed so much; and perhaps we need not account for the early occurrence of the churches dedicated in the name of the saint by the reason provided for us by John Wessyngton, Prior of Durham, who asserts that in general, wherever a church was in after days dedicated to St. Cuthbert, there the body of the saint had rested in the course of its numerous wanderings. At Old Melrose, a chapel dedicated to St. Cuthbert arose on the ruins of the first monastery, and became famous as a resort of pilgrims. Further down the stream, we find a dedication to the saint at Norham, and there his body did rest on its wanderings. At the church of this place, as we learn from Reginald of Durham, was preserved a cross made of the wood of a table upon which St. Cuthbert had been in the way of eating his meals, and upon which the people of that neighbourhood were accustomed to swear when an oath was required. The same writer tells us that a school was kept in the church of Norham, according to a custom "now common enough and recognized." On a fine peninsula formed by the confluence of the Till and Tweed, are the ruins of a small chapel called *St. Cuthbert's Chapel*, and here was to be seen till lately a stone coffin, which has been called by some a boat of stone, on which St. Cuthbert's relics were floated down the stream from Melrose; but as one of the most careful historians of St. Cuthbert * has stated that this story is little better than a modern fiction, it is hardly worth alluding to. Then in Teviotdale is the chapel of Slitrig, in the parish of Cavers, to which I have referred above. This chapel, although roofless, was much frequented on St. Cuthbert's day, by the aged, for devotional purposes, and by the young for dancing and other amusements. On one of these occasions, a great storm of wind and rain and snow arose, which drove all to take shelter within the ruined chapel, where they spent the night, and although in the morning the ground outside was found washed by torrents of rain and covered with snow, yet within the sacred limits not a drop of rain nor a flake of snow had fallen. On another occasion, when William king of the Scots had wasted Northumberland, a person called Hugh Flamang, residing at Maltune near York, took flight from his own abode and took refuge in Teviotdale. Having left all his goods at home, after a time he began to wish to look after them, but dared not stir for fear of the enemy. At last he had recourse to St. Cuthbert, who appeared to him when sleeping, after he had paid his devotions in the chapel of Slitrig. The saint in answer to his prayers, told him to go in the morning to a hollowed stone outside the chapel in the cemetery and take a portion of the moss which would be found adhering to it, and which, as Reginald tells us, naturally grows in vessels generally filled with water. This moss he was ordered to put under his hood on his head, and then he would be under the saint's protection, and might return to his home. Having done all this, he was enabled to pass through the ranks of his enemies without their being able to see him, and so he returned to Maltune.

Among other memorials of St. Cuthbert, it may be noticed, that payments used to be made to the convent of Kelso on the day of his festival.

* Raine's *St. Cuthbert*, p. 44 (note), Durham, 1828.

been found convenient. Two years after this the conventual church of the new abbey was founded, and endowed with increased revenues. The spot on which this foundation was made, was in the neighbourhood of the great castle of Roxburgh, said to have been erected by the Northumbrian princes, and probably occupying the site of a fortress of still earlier date. Here David had a manor of Roxburgh, and here he often resided both while earl, and after he had ascended the throne of his father. A church dedicated to the blessed Virgin stood at Kelso, before the translation of the abbey thither, and was given to the king and the abbey, by Robert bishop of St. Andrews, in whose bishopric it was.

Of the fabric which was thus founded in 1128, and which probably took many years to finish, we can now only judge by fragments and ruins. Enough however remains to attest the richness and stability of the architecture, and the grandeur of the general plan. The style of architecture has been described as almost wholly "transitional Romanesque of late florid character."* The following are the dimensions of the remains of the church—

Length of transept within the walls, 71 feet.

Breadth of the same, 23 feet.

Height of the central tower, 91 feet.

Thickness of the walls of the same, 5 feet 6 inches.

Height of the pointed arches under the tower, 45 feet.

Width of the same, 17 feet.

Diameter of the columns in the choir, 7 feet.

The situation of Kelso on the borders of two kingdoms so often at war with each other,† naturally exposed it to many vicissitudes of fortune, and from the time of the first Edward downwards, we find it frequently reduced to ruin and beggary from the attacks of rough-handed neighbours. In 1344 David II. granted permission "to the Abbey of Kelcow being burnt by England, to cut wood in Selkirk and Jedwart

* Characteristics of old church architecture in Scotland, p. 7. Edin. 1861.

† In later times we find some tokens of the necessities which rose out of the rough habits of the marchers. Thus on 26 Oct. 1557, there is a letter under the Privy Seal of Scotland to "Patrik Hardy chirurgiane burges of Jedburgh," setting forth "how neidful it was to have scherurgianes and Barbouris on the borders, especially in time of war," and the good qualities of Patrik in these respects, and therefore granting to him "ane monkis portioun within her graces Abbey of Melrose with fische, flesche, habit, siluer, fyre, chalmer, coll, candill, breid, drink, victellis and vthir stufte siclike as ony monk of the said Abbey has."

forests for reparation,"* and we find that on such occasions the monks were at times in such distress, that they had to get licence to buy provisions in England, as in 1368, when the abbey is described as "collapsa et quasi adnichilata."† We may form some idea of the rough life to which a border abbot was exposed, when we read that on the night after the battle of Flodden, Andrew Ker of Fernieherst broke into the Abbey of Kelso, and having turned the abbot out of doors, forcibly kept possession of it.‡ In the final destruction of the monastery, the Scottish reformers were mostly anticipated by the Earl of Hertford, whose invasion of Scotland in 1544 was made memorable by the merciless burnings and ravages which accompanied it. In 1546, we find from Lord Eure's report to Henry VIII., that he took the church of Kelso which had again been garrisoned, and wherein were 31 footmen. In June of the same year, when another inroad took place of the garrison of Mack, it appears that the ruins were again occupied, and that sixteen men were taken who "had beilditt them a strength in the old walles of the steeple."§

Nevertheless it appears that some part of the church continued to be used as a place of worship till after the Reformation,§ and the conventual buildings still afforded shelter to a remnant of the monks "for in one of the tumults which took place in 1560, when the monks had been expelled, the church drew the attention of the excited populace, who in their headlong zeal, not content with having defaced the images and burned the reliques upon the steps of the high altar, demolished also whatever else remained of its internal furniture and ornaments, and destroyed still further the already ruinous fabric."§ We find that in 1587 all the monks were dead, and after the possessions of the abbey had passed through several lay hands, they were finally conferred on Sir Robert Ker of Cessford, who in 1599 was created a peer by the style of Lord Roxburgh, and is the ancestor of the present Duke of Roxburgh.¶

The munificence of its founder as well as of the great barons of Teviotdale and the Merse, at an early period raised the abbey of Kelso to be one of the most wealthy of Scottish monasteries. Their lands were numerous, and we learn much of their mode of managing them, from the register of their

* Robertson's Index to the Charters, p. 63. Edin. 1798.

† Rotuli Scotiæ, vol. i., p. 924.

‡ Morton's Monastic Annals of Teviotdale, p. 96.

§ Ib. p. 103.

§ Ib. p. 103.

¶ Ib. p. 105.

charters, as in the thirteenth century many of them were held in demaine. On their land they raised oats barley and wheat. About the year 1300 their property in Redden, one of their granges, was as follows:—The grange which they tilled with five ploughs, and where they had pasture for fourteen score of ewes besides oxen; half a plough-gate, which was let to Richard of the Holm; eight husband-lands and one ox-gang, for each of which certain bond services were performed by the tenant at stated times, namely, every week in summer a journey to Berwick with one horse, which was to carry three bolls of corn, and return either with two bolls of salt, or one boll and a ferloch of coals, and on the next day after every such journey, one day's work of whatever kind might be wanted. When not required to go to Berwick, they wrought two days in summer and three in autumn. To stock his little farm each husbandman received two oxen and a horse, three chalders of oats, six bolls of barley, and three of wheat. The abbot Richard afterwards commuted these services for money, when they gave back their stock and each paid eighteen shillings per annum for his land. Nineteen cottages, eighteen of which were let for twelvecence a year, and six days' work in autumn, during which they were found in food, which they were also when they assisted in washing and shearing the sheep; the nineteenth cottage paid eighteenpence a year and nine days' work. They had also two brew-houses, which paid two marks a year, and a miln which paid nine merks.”*

Another great source of the monastic revenues, arose from the parishes granted to them by their various owners. These parishes instead of enjoying the advantages of a resident clergy, spending on the spot the revenues of the church, were served by ill-paid vicars and chaplains of the monastery, so that the working of the parochial system was thus frustrated at an early period of its development.

Among the arts practised in the monastery was that of caligraphy, which was so often applied in religious houses to service-books, to chronicles, charters, and the registers of them, and we find that some of the most elegant of the charters of David I. and his grandsons issued from the scriptorium of Kelso. The most remarkable of these, and as a writing the most remarkable of Scotch charters, is the great charter of Malcolm IV., granted to the abbey in 1159, which

* Morton p. 114.

is still preserved at Floors. It is carefully and even handsomely written; but its chief interest is derived from an illuminated initial M, which gives us a favourable idea of the art of miniature painting practised in the monastery, and perpetuates a pair of the earliest Scotch portraits that have come down to us. There is no reason to doubt that the two personages represented with the insignia of royalty in this remarkable illumination are King David I., the founder and great benefactor of the abbey, who had died full of years and of honour six years before, and his grandson Malcolm IV. the reigning sovereign, the granter of the charter, whose youthful and beardless face contrasts with the venerable countenance of his grandfather, and accounts for his soubriquet of "the maiden," better than the refuted tradition of his vow of chastity.*

At the Reformation of religion in Scotland, when the monasteries were dissolved, the revenues of Kelso, according to an account taken by the government, were as follows—

£3716 1s. 2d., Scots money.

9 chalders of wheat.

106 chald. 12 bolls of bear.

4 chald. 11 bolls of oats.

112 chald. 12 bolls, 3 firlots of meal.

The abbot was mitred, his lands were erected into a regality, and he was exempt from episcopal jurisdiction; a Bull of Pope Lucius III. declared, that if any archbishop, bishop, or other prelate should presume to promulgate sentences of excommunication, suspension, or interdict at any time against any of the men of the abbey, such sentences should be of no effect.†

After having examined the ruined walls of the abbey, a short walk up the Tweed leads to a ridge in the angle formed by the junction of the Teviot with the silver waters of her more important sister. On this ridge stand the fragments of the great castle of Roxburgh, within whose walls many events of great and national importance have been at various times transacted. The remains of its shattered towers yet attest its great strength, and in ancient times the town of Roxburgh arose around its sheltering walls and became itself a place of mercantile and political importance. At the castle of Roxburgh, David I. and his successors frequently kept

* *Registrum Cartarum de Kelso*. Pref. p. xlv. Edin. 1846.

† *Ib.* p. 359.

their court; here legates were received, royal marriages were celebrated, parliaments and councils were held, a mint was established, and in this fortress Mary, the sister of king Robert Bruce was kept, by orders of Edward I., in an iron cage, from 1306 to 1310. While the castle was in the possession of the English, it was besieged by James II. of Scotland, and it was here that this monarch met his death by the bursting of one of his cannon. A large holly enclosed by a wall is said by Pennant to mark the spot, which elsewhere is said to be near Floors House. It was at Roxburgh that Malcolm the maiden granted his great charter of endowment to Kelso, and it may afford an idea of the varied elements of his court, when we find around him as witnessing his grant, among others the three bishops of Glasgow, Moray, and Dunkeld, William the king's brother and Ada his mother, the abbots of Dunfermline, Jedburgh, Newbottle, and Cambuskenneth, the prior and archdeacon of St. Andrews, the king's chancellor, the archdeacon of Lothian, the chamberlain, the King of the Isles, several earls, with representatives of the families of Umfraville, Sumerville, Moreville, Sules, Cumin, Avenel, Ridel, and Percy. We may also imagine the different races of which his subjects were composed when we find his charters addressed to the Franks, Angles, Scots, and British or Galwenses of his kingdom, while in those early charters Scotia and Lodonia are often distinguished.

The burgh of Roxburgh was at one time of such importance as to form one of "the court of the four burghs of Scotland," a court believed to have been instituted by David I., with the view of regulating all matters regarding commerce. In this town schools flourished in early days, and we find notices of the master of the schools of Roxburgh in the year 1241. About a century later we get a trace of one of the streets of the burgh, where a chantry ("for ever to endure,") was founded in the church of St. James of Roxburgh, out of a burgage tenement called Blakhall in the Kingstreet of that town—and now nothing material remains to tell us of all the busy life which was for many centuries acted here, and of which without the voice of record we should know nothing.

The members will not fail to examine the remains of the fortified mound called Ringley Hall on the south of the Tweed, a few miles up from Kelso. It is situated on the top of a cliff overhanging the stream, and now forming part of a plantation. It is described as being circular on the top, and measuring about 180 feet in diameter. It seems to have

been defended by several steep terraces, and altogether to have features not ordinarily found in these structures.

Of the beauties of the landscape in which Kelso is situated, the members will think it superfluous that I should speak. I may however conclude with the oft quoted lines from Leyden's *Scenes of Infancy* :—

Bosom'd in woods where mighty rivers run
Kelso's fair vale expands before the sun ;
Its rising downs in vernal beauty swell,
And fringed with hazel, winds each flowery dell.
Green spangled plains to dimpling lawns succeed,
And Tempe rises on the banks of Tweed ;
Blue o'er the river Kelso's shadow lies,
And copse-clad isles amid the waters rise.

History of the Wolf in Scotland. By JAMES HARDY.

" But when the Western Empire was o'er-run
By Vandal, Goth, and Saracen, and Hun,
The fleecy charge and precious milken store,
Seem'd swept from off the desolated shore.
Far from the dreary night of Gothic gloom,
Our northern isles did freedom then relume :
Our Scottish foresires, then a shepherd race,
Did tend their flocks—or rous'd the cheering chase ;
These hills and glens and wooded wilds can tell,
How many wolves, and boars, and deers then fell."

CAMPBELL'S *Grampians Desolate*, p. 102.

OF the original animals, which, in the progress of civilization have been extirpated from the country, the Wolf was one of the most formidable. In former times, it appears to have been spread over the greater part of Scotland, a fact attested both by history and tradition ; by the public archives as well as by the names associated with its ravages and haunts.

Some antiquarians have been of opinion, that the mode of burying practised by the native Britons or their immediate successors, may have originated in the dread inspired by wolves.* They enclosed, it is conjectured, the urn containing the ashes of their relative, or the corpse itself, with ponderous slabs of stone, as a protection from their infuriated appetites. Wolves, as is well known from their history, when constrained by hunger, fall upon the sepulchres of the dead, and riot in the unhallowed spoil. There were undoubtedly occasions when such precautions were necessary.

* Heron's Journey through part of Scotland, i. p. 217.

On the western shores of Argyle, the small isle of St. Mungo, still used as a burial place, has been appropriated to this purpose from the days when the wolves were the terror of the land; the passage between it and the main land opposing a barrier, which they in vain attempted to cross.* This scarcely, however, accounts for those old modes of sepulture, adopted by the first inhabitants of Europe, in accordance with the practices of the regions whence they sprung, and carried with them in their migrations, as rites which it would be sacrilege to abandon.

It was also a remarkable feature in the history of these primitive people, that many of them, especially those who possessed the intermediate portions of Scotland and England, were by preference hill-men. Not wholly for self-defence would they fix their residences in the outlandish and exposed tracts, where we now view with surprise their wretched remains, and the traces of obsolete modes of agriculture. To these remote uplands they were compelled in some measure to resort, from the low countries being over-run with wild beasts. "It is observable," it has been said, "in many of the highest inhabited places in the Scottish Highlands, that ridges can be distinctly traced near the summit of our most elevated mountains. Some suppose that such appearances of culture are referable to remote times, when, by reason of the valleys being overgrown with woods, which were the haunts of wolves, bears, and enormous snakes, it was necessary for safety to retire to the tops of the hills, and there cultivate those spots, which retain still the appearance of human industry."†

It has been opposed to the authenticity of the Ossianic poems that they omit all allusion to the chase of the wolf—the *Madadh alluidh* or wild dog of the Caledonian forests.‡ This objection cannot attach to some of the Scottish historians, whose relations are pronounced to be equally fabulous. To vary their exploits, which are often so uniform that we seem transported to the halls of Odin, where the warriors that fell in the fight of to-day, are re-animated to mingle in the morrow's combat, their shadowy monarchs engage in

* Constable's Edinburgh Magazine, Nov. 1817, p. 340.

† Campbell's Grampians Desolate, p. 167.

‡ Laing. Pinkerton's Enquiry into the Early Hist. of Scotland, ii. p. 85. "The Gaelic names for the wolf are *Madadh alluidh*, commonly used; *Faol chu*, *Alla mhadadh*, all of which are composed of an epithet, and a word which now means dog." It is also called *Faol* and *Mac tire*, earth's son. (Campbell's Tales of the West Highlands, i. p. 274.)

splendid hunting matches, in which the wolf figures conspicuously. Dorvadille or Dornadilla, the fourth king of the Scots, "set all his pleasure on hunting and keeping of houndes and greyhounds, ordayning that every householder should find him twoo houndes and one greyhounde. . . . If a hunter chaunced in following the game to lose an eye or a limme, so that he were not able to helpe himselfe after that time, he made a statute that he should be founde of the common treasury. . . . He that killed a wolf should have an ox for his paines. This beast indeede the Scottish men even from the beginning used to pursue in al they might devise, bicause the same is suche an enimie to cattayle, wherein consisted the chieftest portion of all their wealth and substance."* These are a portion of the hunting laws of the ancient Scots, which according to Buchanan, were observed to his day.† Ederus the fifteenth king's "chiefe delighte was altogyther in hunting and keeping of houndes and greyhounds, to chase and pursue wild beastes, and namely the wolfe the herdsman's foe, by meanes whereof his advancement was muche the more acceptable amongst the nobles, who in those dayes were whollye gyven to that kynde of pleasure and pastyme."‡ A little before the falling of king Caratake (whom Boece identifies with the British Caractacus, who died A.D. 54,) "into the handes of the Romaines, there were sundrye straunge syghtes seene in Albion, as fighting of horsemenne abroad in the fieldes, wyth greate slaughter, as seemed on bothe parties; and forthwyth the same as vanyshed away, that no appearance of them coulede any where be perceyued. (Here we have the record of an Aurora Borealis.) Also a sort of wolves in the night season set upon such as were keeping cattayle abroad in the fieldes; and carried away one of them to the woodes, and in the morning suffered him to escape from amongst them againe." To impress this significant fact a figure is given of a wolf running off with a sheep.¶ Ferquhard II., was a prince so very wicked, that Colman the Lindisfarne bishop, who had returned to Scotland in his reign, threatened him with divine vengeance. "And sure his wordes proved true: for within a moneth after, as the same Ferquhard followed in chase of a wolfe, the beaste being enraged by pursuite of the houndes, flew back uppon the king, and snatching at him, did wounde and byte him right sore

* Holinshed's Scotland, p. 13, Ed. 1577.

† Aikman's Buchanan, i. p. 161.

‡ Holinshed, p. 27.

¶ Ibid. p. 40, 41.

in one of his sides, immediately whereupon, whether through anguishes of his hurt, or by some other occasion, he fell into a most filthy disease," viz. pthiarisis.* He died A. D. 668. "Eighteen years did Scotland endure this monster," adds Buchanan. But long previous to this we find a British monarch, falling a victim to a wolf; who, since his son as Wynthoun relates, built both York and Edinburgh, may have reigned over part of Scotland, for aught we know to the contrary. He was one of the immediate descendants of Brutus, Memprys by name, and no credit to the Locryne race.

"Hys brothir he slwe————
For tyl succede tyl hym as kyng.
It happynde syne at a huntyng
Wytht wolwys hym to weryde be;
Swa endyt his inquite."†

Perhaps Shakspeare is as reliable an authority as any of them, when he depicts Macbeth calling up visions of

—————"wither'd Murder
Alarum'd by his sentinel, the wolf
Whose howl's his watch."

Proper names of persons taken from animals were common among the Anglo-Saxons, as expressive of character, and derivatives from the wolf, such as Ulf, Arnulph, Ceolwulf, were favourites with that fierce people. Among the ancient Scots, a similar kind of symbolic representation preserved the memories of their defunct heroes. It is recorded in "The Chronicles of Scotland," 2nd Buke, cap. x., "That king Reatha," (who lived two centuries before the Christian era,) "was the first king among the Scottis that fund ingine to put nobillmen for thair vailyeant dedis in memory, and maide riche sepulturis for the bodyis of thaim that was slaine be Britonis in defence of this realme. He commandit als monie hie stanis to be set about the sepulture of everie nobillman as was slane be him of Britonis. In memorie hereof sindrie of thaim remainis yet in the hielandis. On their sepulturis was ingravin imageris of dragonis, *wolfes*, and other beistis, for no inventioun of letteris was in thay days to put their deides of nobilmen in memore."

Let us now turn to the legends of the saints, which, amidst

* Ibid. p. 148. "A lupis occisarum ovium pelles *pediculos* procreant." Aristotle cited in Joh. Johnstoni Thaumatographia Naturalis, p. 319. Amsterdam, 1661. Plinii Hist. Nat. l. xi. c. 33. "The skin of a sheep, devoured by a wolfe, moveth itching." Bacon's Naturall History, Cent. x. p. 213, fol. 1651.

† Wynthounis Cronykil, i. p. 54.

all their distortions of incidents, afford testimony to the state of the country, and the prevalent customs and beliefs of the age in which they were composed. St. Kentigern, *alias* St. Mungo, the patron saint of Glasgow, died in the year 601,* and his life has been related by Jocelin a Cistercian monk of the house of Fourness, in Lancashire. He settled "at the place called Mellindonor," (Mollendinar burn) near Glasgow. The whole of that district at this period, except near the river, was a forest of wood and bush-land. On one occasion, says his biographer, compassionating some individuals deprived of the oxen with which they laboured their land, he commanded a herd of deer to perform the office; which they willingly did, and in the evening were restored to freedom. One of the tractable creatures, however, was devoured by a wolf, which so enraged the saint, that stretching out his hand towards the wood, where the ferocious beast lurked, he called on him to appear. Laying hold of him, he yoked him along with the companion of the slaughtered deer; caused them by their united strength to plough a field of nine acres, and after this salutary discipline dismissed him.† The memorials of the wolf in the west of Scotland, are in other respects, but scanty. Wolfelyde, a part of the barony of Culter in Lanarkshire, was granted to the convent of Melrose in 1431; and the name survived the Reformation.‡ "Woolf-hole-Craig," a noted resort of Renwick and his followers in the times of the persecution, also points to facts that have "left behind no other record."|| St. Fillan, better known as the patron of several miraculous wells in Perthshire, than as the individual who converted the Caledonians to Christianity, once resolved to build a church "at a place called Siracht, in the upper part of Glendochquhy." The region lay in all its natural wildness; for a wolf, so little restrained by the sounds of peaceful toil, devoured an ox that was yoked in one of the carts conveying stones to the work. A favourable juncture was thus afforded for a display of the holy man's abilities, which were fully approved by the result. Compelled by some overawing influence, the wolf from that time forward, made its appearance regularly at the hours of matin prayers, to which it appeared to pay particular atten-

* Keith's Scottish Bishops, p. 231.

† Jocelin in *Vita Kentigerni*, c. 20, Pinkerton *Vitæ Sanctorum*, p. 287. Cunningham's Church Hist. of Scotland, i. pp. 62, 126.

‡ Morton's Monastic Annals of Teviotdale, p. 276.

|| Life of Mr. James Renwick, by the Rev. Alexander Shields, p. 55.

tion; and when the work was resumed, took the station of its victim, and faithfully discharged its duties! This practice it continued till the work was completed, when it returned not again. It had resumed its native haunts.* But Scotland was too narrow a sphere for feats such as these. They were a common property of saintship, and like tricks of legerdemain could be re-produced on any stage. "In an island in the lake of Orta, in the Grisons, at the spot where now stands a seminary for young ecclesiastics, of old lived, as they say, St. Julius :—his blessed influence extended not only to men, but to beasts also; primitive peace was established between the herbivorous and carnivorous animals, and every thing went off admirably. Whenever a wolf, of ill-regulated appetites, threw himself upon a labouring ox and devoured it, the indignant saint reproved the animal, who immediately allowed himself to be put under the yoke and thenceforth performed the work of his victim."† So potent was St. Francis of Assise, the seraphic doctor, that wolves repaired to the confessional.‡

The vast natural forests of Teviotdale, of which there are now few remains, in early ages harboured a sanguinary horde of wolves. This we learn from a legend transmitted in the Book of Reginald, a Durham monk, on the miracles of St. Cuthbert. Reginald wrote about the close of the 12th century, and the circumstances of the story he had from Dolfin, rector of Cavers, one of his cotemporaries. There was a poor widow in the parish of Cavers, whose livelihood depended upon a small stock of sheep. Unable, like the wealthy proprietors of the district, to hire a shepherd, she committed her all to the guardianship of St. Cuthbert. In this she acted not unwisely; for, while the wolves were constantly making inroads on the neighbouring flocks, her sheep, though without a keeper, always returned safe home. Once, however, a band of hungry wolves, prowling in quest of prey, encountered this shepherdless flock, and saw their helpless condition. Seven of the number detached themselves from the rest, and ran to attack them; but the sheep betook themselves to flight. There was at that time a chapel at Slitrig (Slitrig) dedicated to St. Cuthbert; which, though roofless, was of great repute for the miracles the power of its patron

* *Proprium Sanctorum*, f. xxvii. v. apud *Breviarium Aberdonense*. Dalyell's *Darker Superstitions of Scotland*, p. 271.

† *News of the Churches*, Oct. 1, 1856, p. 265.

‡ *Speculum Vitæ Sancti Francisci*.

had wrought there.* To the churchyard of this chapel, as if to the protection of a shepherd, hard pressed by the wolves, did the affrighted sheep betake themselves. Wonderful to relate! the wolves darting looks of vengeance and eagerness on the booty,

“As famished wolves survey a guarded fold,”

struggled hard to spring into the midst of them, but could never get beyond the enclosure of the churchyard. And what was still more marvellous, the timid sheep, showing themselves no longer alarmed, wheeled round upon their assailants, and with their horns and heads in the attitude of the wild bulls of the woods, beat back the violent and repeated efforts of the wolves to storm the churchyard wall. Then, continues the narrator, the farmers, shepherds, ploughmen, and many others of those who dwelt near, seeing the contest, ran together, not without cordial ascriptions to St. Cuthbert, the author of this miracle. At length, the wolves fairly baffled, and thrown into confusion, slunk away to their forests; and the sheep with much gratulation, were restored to their mistress.† What the garrulous priest of Cavers easily magnified into a miracle, ancient records inform us, might not unfrequently have happened as a common occurrence. In a grant of Alexander II., to the monks of Melrose, in Ettrick forest, we find incidental mention of “Wulfohope,”‡ a name still familiar in the south of Roxburghshire.¶ In the reign of Malcolm IV., (1153—1165,) Robert de Avenel granted to the same parties, the right of pasturage in his lands in Eskdale, reserving to himself the privileges of the feudal baron, to pursue the wild-boar, the deer and the stag.§ One of his successors questioned several of the claims to which the monastics, in virtue of this bequest, presumed they were entitled. Their differences were at length adjusted in 1235, in presence of King Alexander II., when it was determined that the churchmen had no title to pursue the chase on the disputed territory; and they were likewise restricted from setting traps within it, excepting for *wolves*.¶ As early

* There is a tradition that on the lands of Penchrise, near the source of the Slitrig, a chapel formerly stood, which is probably that here alluded to. The adjoining farm is called Priest-haugh. Wilson's *Annals of Hawick*, p. 348.

† Reginaldi Monachi Libellus de Admirandis Beati Cuthberti Virtutibus, c. xxxix. Surt. Soc. Pub.

‡ Morton's *Teviotdale*, p. 273. Chart. Mel. 52, v.

¶ Chalmers' *Caledonia*, ii. p. 132. “Wolf-hope on Cat-lee-burn in South-dean.”

§ Morton, p. 273.

¶ Ibid, p. 274.

as the time of William the Lion (1165—1214), the Melrose monks practised setting wolf-snares, for the protection of their numerous flocks and herds.* Thus far history throws its scattered light athwart the gloomy shadows of the Border forests, and reveals, by shifting glimpses, the depths of the ancient wilderness.

But there were other parts of the kingdom kept in awe by the lank tyrants of the woods. Where record does not explicitly affirm, allusion suggests the inference. In 1390, after the death of Robert II., Alexander earl of Buchan, his youngest son by Elizabeth More, conducted herself with such cruel and relentless barbarity, that his name has descended to posterity as the *Wolf of Badenoch*.† From this we may infer, the general dread inspired by these implacable animals. About the year 1460, the head of the family of Stewart of Garth, in Perthshire, was not only stripped of his authority by his friends and kindred, but confined for life on account of his ungovernable passions and ferocious disposition. The cell in the castle of Garth in which he was imprisoned, was till lately regarded by the people with a kind of superstitious terror. This petty tyrant was surnamed the “*Fierce Wolf*,” and if the traditionary stories related of him have any claim to belief, the appellation was both deserved and characteristic.‡ The superstition of Lycanthropy, also, existed in Scotland. Men of evil passions, it was supposed, were transformed into wolves, and those thus bestialized, became cannibals. “*Ther ben somme that eten chyldren and men, and eteth noon other flesh fro that tyme that thei be a-chaarmed with mannys flesh; and thei be cleped were-wolfes.*”§ The “warwolf” is mentioned in Sempil’s *Philotus* and in the ballad of *Kempion*.|| *Merlin the Wild*, or the *Scottish Merlin*, is represented as suffering his weird or destiny in the shape of a wild beast in the *Prophecies of Waldhave*.¶ But Scottish history supplies a horrible instance of not inferior savageism perpetrated under the human form without any Circean disguise. It occurred in the vicinity of Perth, in the reign of David II., about

* Caledonia ii., p. 132. Chart. Mel. 91.

† *Lupus de Badenach*. Forduni *Scotichronicon*, l. xiv. c. 56. A modern reiver, John Macgregor, long the terror of Strathmore, was known in the low country by the name of the “Red Bull of Badenoch.” He was killed in a skirmish, during a raid about 1707. A. Laing’s *Wayside Flowers*, p. 51, 52.

‡ Stewart’s *Sketches of Highlanders*, i. p. 57.

§ MS. Bodl. 546.

|| Sibbald’s *Chron. of Scottish Poetry*, iii. p. 429. *Minstrelsy Scot. Bord.* iii. p. 244. Also in Kennedy and Montgomery.

¶ *Scots Magazine*, 1802, p. 653.

1341 or 2, "when betwixt the desultory ravages of the English and those exercised upon system by the Scottish leaders, all the regular practice of agriculture was interrupted year after year, and the produce in a great measure destroyed. A great famine was the consequence; the land that once bore crops was left uncultivated, waste, and overgrown with briers and thickets, while wolves and wild deer ("feræ et cervi de montanis descendentes, circa villam sæpius venabantur," are the words of Fordun,) approached, contrary to their nature, the dwellings of man."* Then it was "that an uplandish fellow," named Christiecleik, with his mate, "spared not to steale children, and to kil women, on whose flesh he fed, as if he had bene a wolfe."† In a letter to Pope Clement, Oct. 17, 1311, Edward II., compares the Scottish invaders of Northumberland and Cumberland, in that year, under Bruce, to a pack of wolves coming forth out of their dens, not sparing innocence, sex, nor age.‡ As a Celtic animal the wolf is mentioned by Dr. Smith in *Dan clainne mhuirne*.§ Buchanan mentions two separate islands in the Hebrides, called Luparia or the island of wolves; but he cites the authority of Donald Munro, for there being in his time neither wolf, fox, nor serpent in the peninsula of Harris.|| The Scandinavians who made good their boast, that

"Outpoured we blood for grim wolves,
And golden-footed fray-birds,"—

had the satisfaction to shake hands with their grim allies on the island of Ulva; hence its name from the Norwegian Ulfur, the isle of wolves.¶ On the reverse of the ancient seal of Stirling, a gothic castle, and two branches of a tree, represent the castle and forest of Stirling, as appears from the following line around it, *Continet hoc nemus et castrum Strivilense*. The wolf makes a part of the arms, and is represented on a seal apart, standing on a rock with the motto, *Oppidum Sterlini*.** "Of the *Nemus Strivilense* in the seal of the borough it has, in the spirit of accurate criticism, been remarked, that it probably means nothing more than the grove on the rock. Here, it would seem, the wolf has been

* Scott's Hist. of Scotland, i. p. 194.

† Holinshed's Scotlande, p. 347. "Tanquam lupi eos strangulantes." Fordun, l. xiii c. 46.

‡ Ridpath's Bord. Hist. p. 239.

§ Scots Mag. 1802, p. 804.

|| Aikman's Buchanan, i. pp. 44, 49, 53.

¶ Maculloch's Western Isles.

** Nimmo's Stirlingshire, p. 329.

known to lodge in the basaltic crevices.”* The wolf thus takes its position in heraldry among those *feræ* of Caledonia that

“Razed out of all her woods, as trophies hung
Grin high emblazoned on her children’s shields.”

Craigmaddie, the rock of the wolf, in the parish of Baldernock; and Stronachon, parish of Drymen, “the ridge of the dog,” *i. e.* the wild dog or wolf, are nowise pleasing Stirlingshire souvenirs; but there is some relief in being told that “the place where the last wolf that infested Monteith was killed, is a romantic cottage south-west of the mill of Milling, in the parish and barony of Port.”† In 1283 there was an allowance for one hunter of wolves at Stirling.‡ There is still a place called Wolfhill in the Perth district.

The wolves first drew the attention of the legislature, so far as the remains of the Scottish code enable us to ascertain, in 1427, in the reign of James I.§ In the face of this, it is curious to find no less a personage than Pope Pius II., better known as *Æneas Sylvius*, who visited the country in an ambassadorial capacity, about 1434, positively denying the existence of any such animal in Scotland. “Wolves are not to be found in the kingdom.”|| Statutes were also enacted respecting them in 1457, again in 1525, and finally in 1577. The act of 1525 is merely a modernized version of the law of 1427, which that of 1457 styles as “the auld act made tharon.” It was then statute and ordained, “that ilk baron within his barony in gangand time of the year chase and seek the whelps of woolves and gar slay them. And the baron sall give to the man that slays the woolfe in his barony, and brings the barone the head, twa shillings. And when the baron ordains to hunt and chase the woolfe the tenants sall rise with the baron. And that the barons hunt in their baronies and chase the woolfes four times a year, and als oft as onie woolfe beis seen within the barony. And that na man seek the woolfe with shot, but allanerly in the time of hunting them.”¶ The last is a conservative clause. Although the king and nobility may have wished the nuisance abated, perhaps they were not quite willing to forego the sport to

* *Ibid*, p. 601. Editor’s note. † *Ibid*, pp. 745, 750, 329.

‡ *Innes’ Scotland in the Middle Ages*, p. 125.

§ *Acts of the Parliament of Scotland*, ii. p. 14, 15. Record Commission Pub.

|| *Pii Secundi Pontificis Maximi Commentarii Rerum memorabilium quæ temporibus suis contiguerant, &c.* Francofurti, 1614. *Edin. Literary Gazette*, 1829, i. p. 26. *Pinkerton’s Scotland*, i. p. 150.

¶ *Laws of the Parliament of Scotland*, p. 18, 19, fol. 1781.

which the pursuit of the wolf gave rise. It might, however, be to prevent deer-stalking or poaching for game, which were strictly forbidden. The act of 1457 differs from this in some particulars worthy of notice. The duty of raising the country for the destruction of the wolf, is stated to belong to the sheriff or the "bailies." This was to be done in the district "quhair ony is," "three times in the yer." The period is expressly stated, "betuix Sanct Mark's day and Lammes;" that is, from the 25th of April to the 1st of August; and that for a very explicit reason, "for that is the tyme of the qualpis."* A wedder "unforgeun" was the penalty for disobedience to the summons; "quhatever he be that rysse not." Whoever then or at any other time was successful in slaying a wolf, received a most encouraging reward for his bravery. "He sall haif of ilk householder of that parochin that the wolf is slayne within, a penny." Whenever notice was obtained of a wolf's presence in any quarter, the alarm convoked the *posse comitatus*; "the cuntre sal be ready and ilk householder to hont thame."† So far the text of the Record Commission. The conclusion I take from Glendook's Scots Acts, James II., p. 49. "And they that slayis ane woolfe, sall bring the head to the schireffe, baillie, or baronne, and he sall be debtour to the slayer for the summe foresaide. And quhatsumever hee bee that slayis ane woolfe, and bringis the head to the shiriffe, lord, baillie, or baronne, he sall have sex pennyes." In the Record version the sum given is two shillings, while a fox's head is valued at sixpence.‡ There is no saving clause.

In Scotland, when these acts were passed, there was serious occasion for the interference of the legislature. Bellenden, who at the command of James V., translated Hector Boece's History, says there were "gret plente of haris, hartis, hindis, dayis, rais, wolffis, wild hors, and toadis," in the Caledonian forest;§ and elsewhere he mentions "The wolffis

* Martyn in his Dictionary of Natural History (2 vols, London 1785) says, that "young wolves are found from the latter end of April to the beginning of July."

† Very similar was the custom in Switzerland in Gesner's time. "In Helvetiis et Alpibus perpauci [lupi] reperiuntur: raro enim ex Gallia Cisalpina (Lombardia) et vicinis regionibus advenerunt: et si quis deprehendatur, mox tanquam communis hostis, datis viciatim companarum, ut vocant, signis, venatione publica capitur." Liber de Quadrupedibus viviparis, i. p. 717. Zurich, 1551.

‡ Acts of the Parliament of Scotland, ii. p. 51, 52. The Athenians were more generous. "Ex lege Athenis lata, qua cavebatur, ut qui in Attico lupi catulum occideret, talento donaretur; qui lupum ipsum duobus." Hesychius.

§ Bellenden's Boece. Cosmographia, chap. xi.

ar rycht noysum to the tame bestiall in all partis of Scotland." There was, however, one blessed spot, the valley of Glenmore in Angus, "in quhilk the tame bestiall gettis litell dammage of wyld bestiall." A French writer, whose work was published in 1538, who seems to have followed Boece, affirms of these gentle-hearted wolves, whose leniency was certainly much to be suspected: "it is a fact that in the shire of Angus in Scotland, in the valley of Glenmore, the wolves appear to be of another nature than elsewhere. For there they prey exclusively on divers kinds of wild beasts, which they pursue without doing any injury to the sheep."* Boece's remark has chiefly reference to the fox, as he subjoins "specially of toddis.." Their inoffensiveness he accounts for in his own marvellous way. "Ilk hous nurises ane yung todd certane dayis, and mengis the flesche thair of after it be slane, with sik meit as thay gif to thair fowls or uthir small beistis. And sa mony as etis of this meit ar preservit twa monethis efter fra ony dammage be the toddis; for toddis will gust na flesche that gustis of thair awin kynd: and be thair bot ane beist or fowll that has nocht gustit of this meit, the tod wyll cheis it out amang ane thousand."† It is not easy to determine, whether to Scotland, or England, belongs another wolf referred to by the Frenchman above cited. "I have heard it commonly reported that there are no wolves in England, but I am well assured of one having been seen on this side of Berwick."‡ Three years after the passing of the act of 1525, King James V., his mother, and the Pope's legate, were entertained by the earl of Athol, with a great hunt that lasted for three days. "It is said, at this tyme, in Atholl and Stratherdaill boundis, thair was slaine threttie scoir of hart and hynd, with other small beastis, sick as roe and roebuck, *woulff*, fox, and wyld cattis," etc.§ These field sports were part of the daily life of the Highland population.

* Les Sommaire des Antiquitez et Meruielles Descosse, redige et mys par Jehan de Monstier escuyer. Paris, 1538. Dalyell's Fragments of Scottish History, p. 33. Something like this, is what the Rev. Dr. G. Gordon mentions of the fox in Morayshire, "having recently acquired a comparatively honest character," owing "to the profusion of rabbits now spread over the district," which supply "him with abundance of food without removing far from the mouth of his hole, or subjecting him to detriment or death in visiting the hostile habitations of men." Zoologist, p. 424.

† Bellenden's Boece. Maxwell in his Hill-Side and Border Sketches, i. p. 191, 192, has the impudence to place Glenmore in the Cheviot-hills!

‡ "Jay ouy dire vulgairement, que en Angleterre ny auoit pointet loups, mais ic puis bien asseurer den auoir veu pardeca Beruic."

§ The Chronicles of Scotland, by Robert Lindsay of Pitcottie, ii. p. 346.

On the death of James V., one John Eldar, a clergyman, a native of Caithness, retired to England, and presented to Henry VIII., a project of a union between the two kingdoms. In explaining the reason of the appellation *Redshanks*, given to the Highlanders, he thus proceeds: "Moreover wherefore they call us in Scotland Redshanks, please it your majesty to understand, that we of all people can tolerate, suffer, and away best with cold: for both summer and winter (except when the frost is most vehement,) going always bare-legged and bare-footed, our delight and pleasure is in hunting of red-deer, *wolves*, foxes, and graies (badgers), whereof we abound and have great plenty. Therefore in so much as we use, and delight, so to go always, the tender delicate gentlemen of Scotland call us *Redshanks*."* A lively account of another of these great Highland gatherings for the chace, in the reign of Queen Mary, is preserved in William Barclay's *De Regno et regali potestate*, p. 279, 280. He was a native of Aberdeenshire, and spent the early part of his life, and much of his fortune, at the court of Queen Mary, and accompanied her on this excursion to the Highlands, at the age of twenty-two. "I had a sight of a very extraordinary sport:— In the year 1563, the earl of Athol, a prince of the blood-royal, had with much trouble and vast expense, provided a hunting match for the entertainment of our most illustrious and most gracious Queen. Our people call this a royal hunting. I was then a young man, and was present on that occasion. Two thousand Highlanders were employed to drive to the hunting ground all the deer from the woods and hills of Athol, Badenoch, Marr, Murray, and the countries about. As these Highlanders use a light dress, and are very swift of foot, they went up and down so nimbly, that, in less than two months' time, they brought together two thousand red deer, besides roes and fallow-deer. The Queen, the great men, and a number of others, were in the glen, or narrow valley, when all these deer were brought before them: believe me, the whole body moved forward in something like battle order. This sight still strikes me, and ever will strike me; for they had a leader whom they followed close whenever he moved. This leader was a very fine stag, with a very high head. The sight delighted the Queen very much, but she soon had cause for fear, upon the earl's (who had been from his early days accustomed to such sights,) addressing her

* Cited in Pinkerton's Hist. of Scotland, ii. p. 396, 397.

thus: ‘Do you observe that stag who is foremost of the herd?—There is danger from that stag; for if either fear or rage should force him from the ridge of that hill, let every one look to himself, for none of us will be out of the way of harm, as the rest will all follow this one; and having thrown us under foot, they will open a passage to the hill behind us.’ What happened a moment after confirmed this opinion; for the queen ordered one of the best dogs to be let loose upon a *wolf*; (Laxatus enim reginæ jussu, atque immissus in lupum, insignis admodum ac ferox canis)—this the dog pursues—the leading stag was frightened—he flies by the same way he had come there—the rest rush after him, and break out where the thickest body of the Highlanders was. They had nothing for it now but to throw themselves flat on the heath, and to allow the deer to pass over them. It was told the Queen, that several of the Highlanders had been wounded, and that two or three had been killed outright; and the whole body of the deer had got off, had not the Highlanders, by their skill in hunting, fallen upon a stratagem, to cut off the rear from the main body. It was of those that had been separated that the Queen’s dogs, and those of the nobility, made slaughter. There were killed that day three hundred and sixty deer, five *wolves*, and some roes. The Queen and her party returned to Blair, delighted with the sport.”*

Bishop Lesley, whose work *De Origine, Moribus et Rebus Scotorum*, was written towards the close of the 16th century, complains of the prevalence of the wolves, and their very ferocious character.† The last act respecting them, passed, as has been stated, in 1577. Their existence and that of the wild-boar was quite recent in the recollection of James VI., when he penned his celebrated “Basilicon Doron.” In the first edition of 1599, which was limited to seven copies, there is a passage describing the islanders of Scotland, which was expunged in the subsequent editions. “Thinke no other of them all, then as wolues and wild boars.”‡ Wolf’s-head is an old English term for an outlaw. “They wear a wolf’s head,” says Fuller translating from Bracton, “so that they lawfully may be destroyed, without any judicial inquisition, as who carry their own condemnation about them, and

* Pennant’s *Tours in Scotland*, iii. p. 64. Gunn’s *Historical Enquiry respecting the Harp in the Highlands, &c.*, p. 79. *Scots Mag.* 1807, p. 915, 916. Peacock’s *Perth: its Annals and its Archives*, p. 457, 458.

† p. 19. *Dalyell’s Fragments*, p. 30. *Lupos quam plurimos et eos sævisimos.*

‡ M’Crie’s *Life of Melville*, ii. p. 490.

deservedly die without law, because they refused to live according to law.”* It is remarkable to find the “gentle Jamie’s” line of argument towards an unruly section of his subjects adopted to justify the attempted assassination of an unpopular official of his grandson, Archbishop Sharpe. “It is acknowledged by all rational royalists, that it is lawful for any private person to kill an usurper, or a tyrant, *sine titulo*, and to kill Irish rebels, and tories, or the like, and to kill bears and wolves, and catch devouring beasts, because the good of his action doth not only redound to the person himself, but to the whole commonwealth, and the person acting incurs the danger himself alone.”†

Harrison, who wrote in the time of Elizabeth, says that though the English “may safelie boast of their securitie,” in respect to wild animals, “yet cannot the Scots do the like in everie point within their kingdome, sith they have greeuous woolfes and cruell foxes, beside some other of like disposition continuallie conversant among them, to the general hinderance of their husbandmen and no small damage vnto the inhabitants of those quarters.”‡ John Taylor, water-poet, made his “Penylesse Pilgrimage” into the north in 1618, and was present at a great hunting in Braemar, in which he testifies to have seen the wolf. “My good Lord of Mar having put me into shape, I rode with him from his house, where I saw the ruins of an old castle, called the Castle of Kindroghit. It was built by King Malcolm Canmore (for a hunting house) who reigned in Scotland when Edward the Confessor, Harold, and Norman William reigned in England: I speak of it because it was the last house that I saw in those parts: for I was the space of twelve days after, before I saw either house, corn-field, or habitation of any creature, but deer, wild horses, *wolves*, and such like creatures, which made me doubt that I should never have seen a house again.”§

Camden, whose *Britannia* was published in 1586, while alleging that wolves were found in many parts of Scotland, particularly specifies Strath Naver or Sutherlandshire. “It

* Bracton, lib. 3, tract 2, cap. 11. Fuller’s *Worthies of England*, p. 162.—By the law of Edward the Confessor. The bear and wolf were outlaws by the old Norwegian statutes. “Biorn og ulf skal hverneta utlægr vera.” (Crichton and Wheaton’s *Scandinavia*, i. p. 193.) In Iceland *vagr* is a wolf, and also an exile—an outlawed man being regarded as a wolf. (Mallet’s *Northern Antiquities*, p. 30.)

† Testimony of James Mitchell, 1678. M’Gavin’s *Scots Worthies*, ii. p. 178.

‡ Holinshed’s *Chronicles*, i. p. 378. London, 1807.

§ Penny Magazine, 1841, p. 490. Scott’s *Marmion*, note v.

is grievously infested with fierce wolves, which not only make fierce havock of cattle, but even fall upon men.”* To this information we owe a simile of Pope, in the *Imitations of Horace* ;—

“ Loud as the wolves, on Orcas’ stormy steep,
Howl to the roarings of the northern deep ; ”

a repetition of the image by Collins, in the *Ode to Liberty* ;—

“ Where Orcas howls his wolfish mountains rounding ; ”

and Campbell’s

“ And waft, across the waves’ tumultuous roar,
The wolf’s long howl from Oonalaska’s shore.”

Drayton makes a similar allusion in a small collection of his “ *Poems*,” published in 1608, Sonnet 25.

But wolves existed in the extreme north of Scotland, considerably later than the time of the great English topographer. Sir Robert Gordon in his history of the Earldom of Sutherland, written in the year 1630, mentions the wild animals that abounded in the county in his days. The numerous “ forests and schases ” were, in his estimation, “ verie profitable for feiding of bestiall, and delectable for hunting. They are full of reid-deer and roes, woulffs, foxes, wyldcatts, brocks, skuyrells, whittrets, weasels, otters, martrixes, hares, and fumarts.” According to the late Mr. James Wilson a tradition exists in the Edderachillis district, forming the western portion of what is called Lord Reay’s country, “ that wolves were at one time so numerous, that to avoid their ravages in disinterring bodies from their graves, the inhabitants were obliged to have recourse to the Island of Handa as a safer place of sepulture.”† Hence we have in Sutherlandshire the wolf lake, Loch Maddie. In Ross-shire Inch Maree, in Loch Maree, dedicated to a saint of that name, still continues a burial place, chosen, it is said, like all those which are found in islands to prevent depredations from the wolves of ancient days.‡ And there, of old, according to the nameless author of *Albania* ;—

———“ The haughty thanes of Ross
Were wont, with clans and ready vassals throng’d
To wake the bounding stag or guilty wolf.”

* Gough’s *Camden*, ii. p. 445.

† Wilson’s *Voyage round Scotland*, i. p. 346, 347. Wilson’s (Dr. D.) *Archæology and Pre-historic Annals of Scotland*, p. 192.

‡ Macculloch quoted in *Chambers’ Gazetteer of Scotland*, p. 755.

The story of the last wolf of Sutherland was told to Mr. J. F. Campbell, by the Duke of Sutherland's head forester in 1848, and is given in his "Popular Tales of the West Highlands," i. pp. 273, 274. "There was once a time when there were wolves in Sutherland, and a woman that was living in a little town lost one of her children. They went all about the hills looking for the lad, but they could not find him for three days. At the end of that time they gave up, but there was a young lad coming home late through a big cairn of stones, and he heard the crying of a child, and a kind of noise, and he went up to the cairn, and what should he see, in a hole under a big stone, but the boy and two young wolves with him. He was frightened that the old wolf would come, so he went home to the town, and got two others with him, and in the morning they went back to the cairn and they found the hole. Then one of the lads stopped outside to watch, and the other two went in, and they began to kill the young wolves, and they were squealing, and the old one heard them, and she came running to the place, and slipped between the legs of the lad who was watching, and got her head into the hole, but he held her by the tail. 'What' said the lad who was inside, 'is keeping the light from us?' 'If the root of Fionn (or if the hairy root) breaks thou wilt know,' said the man outside. He held on, and the lads that were inside killed the wolf and the young ones, and they took the boy home to his mother, and his family were alive in the time of my grandfather, and they say they were never like other people." This reminds Mr. C. of Romulus and Remus, and he might also have cited Cyrus and his canine nurse. "It appears on very strong evidence that wolves really carry off and suckle children in Oude now, and that these children grow up half savages." He adds that he has heard the same story told in the Highlands of a wild boar. I have also heard the same tale of a Highland wild sow, and a very ludicrous *tail* it was. There is a version of it in "Tales and Sketches of the Ettrick Shepherd," but the scene is transferred to America. Its resemblance to one of the Morayshire traditions, (afterwards cited,) is worthy of remark.

Large tracts of the Highland forests were purposely destroyed in the latter part of the 16th and the early part of the 17th century. "On the south side of Beann Nevis a large pine forest, which extended from the western braes of Lochaber to the Black water, and the mosses of Ranach, was burned to expel the wolves. In the neighbourhood of Loch

Sloi, a tract of woods, nearly 20 miles in extent, was consumed for the same purpose.”*

“Woolf-skins” rank on the customs’ roll of Charles II., in 1661, two ounces of silver being taken for “ilk two daker.”† Sir Robert Sibbald, whose *Scotia Illustrata* appeared in 1684, writes thus:—“In former times wolves abounded, but the race is now exterminated from the island.”‡ Buffon, however, who might have derived his information from Scottish refugees, declared that while the English pretended they had cleared their island, to his certain knowledge, they still existed in Scotland.§ Pennant places their final destruction in 1680, and says the honour of the deed is ascribed by tradition, “to the famous Sir Ewen Cameron,” of Lochiel.|| “I have travelled,” says the same observant naturalist, “into almost every corner of that country, but could not learn that there remained even the memory of these animals among the oldest people.” Such traditions, however, do exist, and from one of them related by the late Sir Thomas Dick Lauder, it appears that the final extinction of the wolves must have happened, at a period considerably later than has been usually assigned. The last wolf of Morayshire was slain, by Macqueen of Pollochoch, while yet a young man, a stalwart Highland laird, who was alive within half a century. The following are said to have been the circumstances. A poor woman crossing the mountains in the upland parts of Morayshire, was assailed by the wolf, and her infants devoured, and she escaped with difficulty to Moyhall. The chief of Mackintosh, moved by pity and rage, despatched immediate orders to his clan and vassals, among whom was Pollochoch, to assemble the next day at twelve o’clock, to proceed in a body to destroy the wolf. All were eager to obey. Pollochoch, however, on whose gigantic strength and determined courage, much reliance was placed, was absent. At length when the chief’s patience had been nearly exhausted, he arrived; about an hour after the appointed time. The wrath of the chief rose high, but was as speedily ap-

* Notes to Mr. James Hay Allan’s (J. Sobieski S. Stuart,) poem, the “Last Deer of Beann Doran.” Poems, London 1822.

† Glendook’s Scots Acts, Charles II., p. 36. A daiker of hides is either ten or twelve.

‡ Scot. Ill. pars. ii. p. 9.

§ Les Anglois pretendent en avoir purgè leur isle, cependent, on mà assurè qu’il yen avoit en Eccosse. Hist. Nat. vii. p. 503.

|| Pennant’s Hist. of Quadrupeds, i. p. 248. Macaulay’s Hist. of England, ii. p. 320.

peased, by Pollochoch producing from the folds of his ample plaid—the wolf's head ! “ Exclamations of astonishment and admiration burst from chief and clansmen, as he held out the grim and bloody head of the monster at arm's length, for the gratification of those who crowded around him. ‘ As I came through the slochk [hollow or ravine], by east the hill there,’ said he, as if talking of some every day occurrence, ‘ I foregathered wi' the beast. My lang dog there turned him. I buckled wi' him, and dirkit him, and syne whittled his craig, and brought awa' his countenance, for fear he might come alive again ; for they are very precarious creatures.’ ‘ My noble Pollochoch !’ cried the chief in ecstasy, ‘ the deed was worthy of thee ! In memory of thy hardihood, I here bestow upon thee Seannachan [or, the old field, consisting of ten acres], to yield meal for thy good greyhound in all time coming.”* The same writer has preserved another tradition of the extirpation of these fell animals in Morayshire. “ The last wolves existing in this district had their den in a deep sandy ravine, under the Knock of Braemory, near the source of the Burn of Newton. Two brothers, residing at the little place of Falkirk, boldly undertook to watch the old ones out, and to kill their young ; and as every one had suffered more or less from their depredations, the excitement to learn the result of so perilous an enterprize was universal. Having seen the parent animals quit their den in search of prey, the one brother stationed himself as a sentinel, to give the alarm in case the wolves should return, while the other threw off his plaid, and, armed with his dirk, alone crawled in to despatch the cubs. He had not been long in the den, when the wolves were seen by the watchman hastening back to the ravine. A sudden panic seized the wretched man, and he fled without giving the promised warning, and never stopped till he crossed the Divie, two miles off. There, conscience-stricken for his cowardice, he wounded himself in various places with his dirk ; and on reaching Falkirk, he told the people, who eagerly collected to hear the result of the adventure, that his brother was killed, and that he had miraculously escaped, wounded as he was. A shout of vengeance rent the air, and each man catching up whatever weapon he could lay hands on, the whole gathering set out, determined, at all hazards, to recover the mutilated remains of their lost friend. But, what was their astonishment, when, on reaching

* Account of the Great Floods of August 1829, pp. 41—43.

the Hill of Bogney, they beheld the mangled and bloody form of him whom they supposed dead, dragging itself towards them. For a moment they were awed by a superstitious fear, but they soon learned the history of his escape. He had found little difficulty in killing the cubs, and he was in the act of making his way out, when the mouth of the hole was darkened, and the she-wolf was upon him. With one lucky thrust of his dirk, he despatched her at once; but his contest with her grim companion was long and severe; and although he fought in that narrow place, and from behind the body of the brute he had killed, he was nearly torn to pieces before he succeeded in depriving his ferocious enemy of life. The indignation of the people against the dastard brother, on thus beholding his falsehood and cowardice made manifest, knew no bounds. They dragged him before the laird, who, on hearing the case, adjudged him to be forthwith hanged on the summit of a conical hill,—called Thomas Rhymer's hill,—a sentence that was immediately put in execution.”*

The way-marks left by these atrocious animals in our literature and speech are neither numerous nor particularly original. The reproachful term of “Wolf,” at the Reformation, was metaphorically appropriated to the Romish clergy.

“Attend, and take gude keipe
To them that comes to thee
Into the habit of ane sheepe
With subtill sermons slie;
For doubtles they were inwartlie
False wolves under cote.”

Scottish Poems of the 16th Cent. ii. p. 140.

“Sa sillie saulis that bin the Christis sheip
Ar gevin to hungrie gormand wolfis to keip.”

Sir David Lindsay's Papingo.

“Quhat halines is thair within?
Ane woulf cled in ane wedder's skin?”

Lindsay's Satyre of the Thrie Estaitis.

The Greek proverb, “*Hos lukos arna philei* ;” Ut lupus ovem amat, “You give the wolf the wedder to keep;” (ovem lupo commisti. *TERENCE*), has a characteristic Scotch version:—“When the tod preaches, beware of the hens.”† Terence's phrase, *Lupum auribus teneo*, “I have a wolf by the ears,” re-appears in Ross's *Helenore*:—

* Account of the Great Floods of August 1829, p. 67.

† In a Norse fable the fox is chosen herdsman, and disposes summarily of the flock. (*Dasent's Norse Tales*, p. 59.)

"But thought the sheep she'd geen the wolf to had
When she had choice o' sic a neiper made."

"Twa wolves may worrie ane sheep," says one proverb; and Alexander Arbuthnot laments among the woes of a poor scholar that—

"This warld has maid the proverb manifest
Quha is ane scheip the wolf will sune him rent;"

in other words, "The lone sheep's in danger of the wolf." "A wolf is still a ravenous beast, though it be in chains," says Boston. "Dark as a wolf's mouth," is an expression we owe to Walter Scott. "Wolves'-birds," *i. e.* offspring, occurs in one of Principal Rollock's Sermons, (Select Works, i. p. 519, Wod. Soc.) On this the editor, De Gunn, remarks "This seems to be an attempt of the [original] editors to Anglicise the Scottish expression 'Tod's birds,' or 'bairns,' used by Robert Bruce, p. 354, Wodrow edition." But the fact is this occurs as a native term in the title of a Scottish act against the wolves. "The woolfe and woolfe birdes suld be slaine," (Glendook's Scots Acts, James i. p. 18). Scott has once more rendered it current. "She-wolf be silent with thine ill-omened yell. There shall never be coronach cried, or dirge played, for thee or thy bloody wolf-bird." (Highland Widow, Chron. of Canongate, 1st Ser. i. p. 257.)

It has been suggested by the Rev. R. Lambe of Norham, in his notes to the Battle of Flodden, p. 164, that the Scottish lullaby, *balow*, or *be balclow*, may be rendered in French *be bas*, *là le loup*, "Hush! there is the wolf." In Boucher's Glossary it is, *En bas le loup*, "The wolf below!" while Jamieson explains it, *Bas, là le loup*, "Be still, the wolf is coming." "Hae ye been a loup-hunting?" a query, addressed to one who has been very early abroad, is supposed by Jamieson, to allude to the hunting of the wolf in former times.

In the Skye and Berneray versions of the Sea Maiden in Campbell's Highland Tales, pp. 94, 96, 98, the wolf appears as a "kindly grateful beast," but this may be owing to his having a Norse prototype, as in "The Giant who had no heart in his body," (Dasent, pp. 49, 56); for the wolf was one of Odin's sacred beasts. So the were-wolf that carried off William in the old romance treated him tenderly. Mr. Campbell (Vol. I. p. 272) communicates a Gaelic fable, where the fox cheats the wolf into the belief that the reflection of the moon on the ice is a cheese, and thereby it loses its tail.

This, he remarks, is the same as the Norse story, "Why the bear is stumpy tailed." (Dasent's *Tales from the Norse*, p. 177, and Thorpe's *Yule-tide Stories*, p. 278). But an equally good parallel occurs in Petrus Alphonsus, where the wolf is left in a well, looking after a supposed cheese made by the moon's image in the water. This is imitated by La Fontaine. (Ellis's *Early English Romances*, p. 42). In Pilpay's *Fables*, p. 123, a drake mistakes the moonshine for a fish. Thus far for the wolf as a myth.

Of the wolves that once tenanted the Border forests, time has left few traces. They did not, however, perish unremembered. "Some blue stream winds to their fame." Chalmers cites, in Roxburghshire, Wolf-cleugh, in Robertson parish, on Borthwick-water; Wolf-cleugh, on Rule-water, and Wolf-hope, on Catlee-burn, in Southdean parish; to which may be added Wolflee or Woole, on Wauchope-burn; and Wolf Keilder, on the Northumbrian border, a branch of the Keilder, as bearing testimony to their ancient haunts. There are also Wolf-gill land, in the parish and shire of Dumfries, and Wolfstar, in the parish of Pencaitland, East Lothian. It is thus that the minstrel, when he peoples the scenes,

"Desert now and bare,
Where flourished once a forest fair,"

assigns a place, after the pursuit of the stag, to the wolf, "a fiercer game."

"Of such proud huntings many tales
Yet linger in our lonely dales,
Up pathless Ettrick and on Yarrow."

Sir Walter Scott was of opinion that "the worm," which the "wode Laird of Lariestoun" is represented as slaying, on an old sculptured stone placed above the south entrance of Linton Church, Roxburghshire, resembles "rather a wolf or boar, with which the neighbouring Cheviot mountains must, in early times, have abounded."* Berwickshire possesses few such storied spots.† There was, in 1769, a farm called Burn-

* Minst. Scot. Bord. iii. p. 237.

† There is no good authority for the name of the parish of Westruther, as has been stated in the new Statistical Account, having once been Wolfstruther. This statement appears to have originated from an observation made by Mr. John Veitch, minister of the parish above 54 years, (died 1703,) in his description of Berwickshire written for Sir Robert Sibbald. "That parish (says he) of old had great woods with wild beasts, fra quhilk the dwellings and hills were designed; as Woolstruther, Roecleugh, Hindside, Hartlaw, and Harelaw." (Sibbald's MS. collections, 208. Adv. Library.) In itself the conjecture is too wide. Some of them are probable; but Harelaw comes from *her, hoar, har, har, war*, a boundary, the fertile source of names of places throughout the island.

brae and Wolfland, in the parish of Nenthorn, belonging to Kerr of Fowberry.* The name seems to imply that it had been held in former times by the tenure of hunting the wolf; lands thus granted being called Wolf-hunt-lands.† On the farm of Godscroft a cairn, now removed, was called the Wolf-Camp. It may have been a den of wolves, as in the Sutherland story. Nor must Fastcastle, the representative of the Wolf's Crag of the Bride of Lammermoor, be passed over, whose scenery and site fully justified a Scottish monarch in remarking, that "the man who had first chosen Fastcastle for his residence, must have been in heart a thief;" though insignificant now are the remains of the towers once

"Broad, massive, high, and stretching far,
And held impregnable in war."

The epithet in the romance may have been suggested by the Wolf Crag in the Frith of Forth, on which, on the 29th of June, or the 1st of July, 1335, during a hostile cruise on the Scottish coast, the English admiral's ship ran aground.

"Amang the craggis that of alde
In Scotlande ware the Volvys calde,
The grettast a schype of thame al
Thare brokyn was in pecis small."‡

Another exemplar the novelist had in Craig-Vad, or Wolf-Cliff, a rock in a pass between Monteith and Appin, where a battle was fought between the Appin men, under Donald of the Hammer, a highland marauder, and the Grahames of Monteith, led on by the earl.§ There is also a Craig-mad of similar signification in Tweedsmuir, in Peeblesshire.|| But the appellation Fastcastle also may challenge, on account of its appropriateness; for the wolf once infested its precincts.

"The neighbouring dingle bears his name."

(Hamper). Besides, Mr. Veitch was in the constant practice of writing the name of the place Woolstruther, and not Wolfstruther. (Lives of Veitch and Brysson, edited by M'Cric.) Chalmers has satisfactorily shown that it derived its name from a swamp in which the village was situated (Caledonia, ii. p. 389). Adam de Gordon, in the 13th century, granted to the convent of Kelso, a pasture in his marsh called *Westruther*. (Cart. Kel. 118.)

* Newcastle Journal, July 29, 1769.

† In the 11th year of Henry VI., 1432, Sir Robert Plumpton possessed a bovate of land, in Mansfield-Woodhouse, Nottinghamshire, called *Wolf-hunt-land*. It was so named from its being held by the service of winding a horn, and chasing or frightening the wolves in Shirewood Forest. Testa de Neville, in Strutt's Sports and Pastimes, p. 14. Plumpton Correspondence by T. Stapleton, F. S. A., p. 92, 93. Camd. Soc. Pub.

‡ Wyntownis Chron. ii. p. 193. Fordun, l. xiii. c. 31.

§ Tales of a Grandfather, 2nd Ser. i. p. 145, 6.

|| Caledonia, ii. p. 915.

Not half-a-mile to the west, a small dell is called Wolden, and a piece of ground bordering it is the Wolden-lees, quasi Wolfden. But without resorting to doubtful etymologies, the animal's name is retained in full in Wolf-cleugh, a short open ravine on Penmanshiel moor, almost within sight of the Soldier's Dike, a ruined wall, which tradition affirms environed the grazing grounds of the ancient castle. A well-known tradition, connected with the wolf, prevails all over the Lammermoors, of which a version has been presented by Mr. Robert Chambers, in his "Picture of Scotland." "At a very remote period the whole region was overspread with wood; but there is now not so much as a single tree anywhere to be seen. Besides being universally wooded, it was infested by wild beasts. The lady of Gamelshiels Castle, a ruined strength, situated in a hope or small glen near the farm of Millknowe, was one evening taking a walk at a little distance below the house, when a wolf sprung from the wood; and, in the language of the simple peasantry who tell the far-descended story, *worried her*. Her husband buried her mangled corpse in the corner of the courtyard, and ever after, till death sent him to rejoin her in another world, sat at his chamber window, looking through his tears over her grave; his soul dark as the forest shades around him, and his voice as mournful as their autumnal music. This castle was one of a chain which guarded the pass between Dunse and Haddington; a natural opening across the hills formed by the Whitadder, near the head of which stream it is situated. Two tall, spiky, pillar-like remains of the tower are yet to be seen, by the traveller passing along the unfrequented road, far up the dreary hope; and a flat stone covering the grave of the unfortunate lady yet exists, to attest the verity of a story, so finely illustrative of the aboriginal condition of the county."* The proprietor is said to have been a Home, descended from the Wedderburn family. The lady was buried in the garden, rather than the family burial place, that he might indulge his sorrow over her grave. He caused a stone to be placed above it, on which he sat inconsolable, nursing his sad frenzy. He survived her for many years; and when he died he was buried beside her. In confirmation of the tale, the tenant of Millknowe was till lately restricted by his lease from ploughing or digging within a certain distance of their remains. It is now ploughed over, and the stone removed.

* Chambers' Pict. Scot. i. p. 45, 46.

However gratifying it may be to our love of perilous adventure, and our desire of exciting information, to look back from the quiet and conscious security of our woodland strolls, over long years of outrage and dangers occasioned by animals whose existence no longer fills us with alarm, the reality and experience of that period furnishes a striking contrast to the tranquillity with which it is contemplated. Some idea of it may be formed from the official reports of Livonia, a territory, from the vast forests with which it is overspread, still subject to the devastations of wolves. In 1823, in that province alone, the wolves destroyed 1841 horses, 1807 horned cattle, 733 calves, 15,182 sheep, 726 lambs, 2545 goats, 183 kids, 4190 swine, 312 sucking pigs, 703 dogs, 1243 fowls, 673 geese.* In examining these proportions, we see how true are the old Scotsman's lines—deductions it may be from his personal experience—

“ He feris great beastis, and ragis on the small,
And leiffis in slauchter, tyranny and blud,
But ony mercy, quhare he may ouir thrall.”

Bellenden's Proheme to Hector Boece.

* Edin. Phil. Journ. xi. 1831, p. 398.

Botanical Notices. By GEORGE HENDERSON, Surgeon,
Chirnside.

THE following are unrecorded stations of three of our more interesting plants :—

OROBUS SYLVATICUS, on the hedge bank, by the way-side, to the east of Hill-end in the parish of Coldingham—also by the side of a ditch, to the north of the onstead, on the same farm.

ASTRAGALUS GLYCYPHYLLOS, on the north bank of the Whitadder, a little to the west of the ruins of the old border-tower of Blanerne. Two stations for this plant have recently been lost ; the one at Whitehall in the parish of Chirnside, has been extirpated in the course of some improvements there—and the other, in the ravine above Burnmouth, by the line of the railway.

TYPHA LATIFOLIA, in a ditch between Dykegatehead and Hylton, parish of Whitsome—and near Ramrig, in the parish of Swinton.

On the old Celtic Town at Greaves Ash, near Linhope, Northumberland, with an account of Diggings recently made into this and other ancient remains in the Valley of the Breamish. By GEORGE TATE, F.G.S., Corresponding Member of the Society of Antiquaries in Scotland, &c.

"'Tis time to observe occurrences, and let nothing remarkable escape us; the supinity of elder days hath left so much in silence, or time hath so martyred the records, that the most illustrious heads do find no easie work to erect a new Britannia."—SIR THOMAS BROWNE.

SCATTERED over the uncultivated moorlands and hills of North Northumberland are many fortlets and circular foundations, which from their form, rude structure, and association with barrows and cist-vaens, may with great probability, if not certainty, be attributed to the Celtic or ancient British race who peopled Northumberland, prior to the Roman invasion of our island. The hills bounding the valley of the Breamish are studded over with many of these structures; but the most remarkable are the ruins of a Celtic town on Greaves Ash, near to Linhope.

Aided by the liberality of His Grace the Duke of Northumberland, the Berwickshire Naturalists' Club has been enabled to make excavations among these ruins during the present summer; and two other fortlets and several barrows have been partially opened. The excavations have been carefully and systematically conducted, with the view of showing the form and arrangements of the towns or fortlets, and of discovering relics which might help to determine their age, or throw light on the character of the people who erected them.* These diggings have been successful in giving information respecting the rude masonry of the walls, the form and style of dwellings, and the manner in which towns were arranged and fortified in very early periods; and

* The Club is indebted to Ralph Carr, Esq., of Hedgeley, and J. C. Langlands, Esq., of Old Bewick, and H. MacLauchlan, Esq., for their occasional aid in directing the excavations; and to R. Carr, Esq., Wm. Roddam, Esq., of Roddam, H. Allgood, Esq., of Nunwick, and Wm. Colville, Esq., of Yetlington, for their readiness in granting liberty to make investigations on their estates. It is also due to Mr. Coulson of Corbridge to acknowledge his zeal and intelligence in superintending the workmen.

though the relics found are not numerous, yet all of them are interesting and some are novel additions to our local antiquities. An account therefore of this Celtic town and of the result of the diggings, may furnish a few instructive materials to the pre-historic annals of the county.

Greaves Ash, on which the remains of the old town stand, is an elevated platform of somewhat level and rocky ground, on the southern slope of Greenshaw hill. The site has been chosen with judgment; for although far up among the Cheviot range—in the region of storms and tempests—the situation is tolerably sheltered, being encompassed nearly on all sides by hills, and yet commanding a pretty extensive view over the valley of the Breamish. Greenshaw, and the great crag-crested Dunmore, protect it on the north; westward is Ritta hill, and not far up the valley are Standrop with its huge fallen blocks of stone, and the loftier and rounder mountain of Hedgehope; in front are the Alnham moors, sloping upwards to Shillmoor, with Bleakhope and Hogden further in the distance; and to the east is the range of Ingram and Reaveley hills, divided by a narrow gorge, through which the Breamish escapes from the mountainous regions.

This town, or ancient British Oppidum, consists of three principal parts; and as these are all defended by encircling walls, I shall, to distinguish them, call them the Western Fort, the Eastern Fort, and the Upper Fort. The plan (*Plate 4*.) shows the arrangement of the whole and the relation of the several parts to each other.* The Western Fort (A) is largest, and directly connected with the Eastern Fort (B) by enclosures and a rampart (D). The upper Fort (C) is north-eastward from the latter, and is connected with the others by a road and rampier (G). To the whole, which form one assemblage of dwellings and fortifications, I shall apply the term town, or oppidum. Besides these parts, there are on the lower ground south-eastward of the outermost rampart, several old walls, which were very probably coëval with the town, and which form enclosures of considerable extent. The town itself is of no great size, but taking the town and enclosures together, we find an area of about 20 acres covered with their ruins.

All the walls of the town, of the dwellings and enclosures have been built of the porphyry rock of the district; neither

* For this accurate plan, I am indebted to my friend, Mr. Wm. Wightman, of Wooler.

lime nor even clay has been used to cement the stones together, nor is any tool mark visible. Many of the stones are water worn, and have been taken out of the banks and channels of the river Breamish and the Linhope burn; others are more angular, and may have been detached from the rocky hills around; for this could have been done without much mechanical skill, since the porphyry of these hills is jointed and fissured in all directions, and readily yields both large and small blocks. The storms of some twenty centuries or more have broken over this town; and the lapse of time would slowly but surely reduce it to a ruin; but the dilapidations made by man have been more destructive than the elements, for the walls have been a quasi-quarry, whence stones have been taken to build fences and houses; and hence little more remains above the surface, than the foundations of the fortifications and dwellings.

WESTERN FORT.—The Western Fort (*Plate 4, A*) consists of a number of hut circles and other enclosures surrounded and defended by two strong stone walls. These walls, which I shall call *Ramparts*, form irregular circles—one within the other; the inner circle having an average diameter of 213 feet and enclosing an area of about five-sixths of an acre, and the other having a diameter of 309 feet and enclosing an area of about two acres. *Plate 5* gives a view of the lower forts, as seen from Greenshaw hill, which is northward of this part of the town.

Ramparts. The outer rampart is the strongest; the width varying from 10 to 12 feet, while that of the inner one is from 5 to 7 feet. Only one course of stones was seen above the surface; but excavations, made chiefly on the south side, exposed three and four courses which show the character of the work. *Plate 6* is a view of this masonry as taken by photograph.

Both ramparts are built in the same manner, of unhewn blocks of porphyry of various sizes and shapes; those forming the faces of the wall are usually large, and carefully fitted to each other, while the space between is filled with others of a smaller size. There are besides peculiarities of structure; at intervals long and very large blocks are set upright, and at their sides flatter stones are built into irregular courses. In some parts, we find courses of stone built across the breadth of the wall at right angles to its face; and this has been done so carefully, that the places where it occurs have been mis-

taken for the sides of gateways. Professor Phillips has noticed a structural peculiarity of this kind, in the walls surrounding the hut foundations of Ingleborough in Yorkshire.* Such are the contrivances of a rude people to bind together unhewn stones, and give stability to walls, which have not been strengthened by lime or even clay, for nothing save a little ordinary soil, in some parts, fills the spaces between the stones. In Scotland and in the north of England "dry stone" fences are still built; but the masonry of these ramparts, from the large size of the blocks used for their face, appears superior to the "dry stone walling" of the present period. How high these ancient cyclopæan ramparts had originally been, it is now impossible to determine; but with such a thickness as they had, they may have reached the height of 10 or even 15 feet.

Excepting on the south side, there is a considerable space between the outer and inner rampart; on the north-east and the west sides this space is 50 feet in breadth. A few hut circles can be traced within it, but it is more especially divided by cross walls into enclosures of considerable size which may have been used for horses and cattle. These cross walls are coeval at least with the outer rampart, for they are built through it.

On the south side of the fort, the space between the ramparts contracts; the entire breadth from the outer face of the outer rampart, to the inner face of the inner rampart, is only 22 feet. And what is peculiar and puzzling—we find a third wall built between the ramparts. First we have the outer rampart carried along the brow of a steep hill, with its outer face formed of very large blocks carefully set; next at a distance of 10 feet is the intercalated wall, from 3 to 4 feet wide and rudely built, the space between this wall and the external range of blocks being filled with smaller stones; then comes another space of about 2 feet, filled similarly with small stones; and afterwards the inner rampart which is here 6 feet wide, but with its outer face built with remarkable care. There is therefore a defensive rampart formed of three distinct walls, running parallel with, but a little distant from each other, with the intervening spaces filled up with small stones and earth. So far as I know, this curious construction has not hitherto been noticed; that it is however not accidental, or a mere freak, but adopted by design to attain

* Phillips' *Rivers, Mountains, and Sea Coast of Yorkshire*, p. 28.

some important object, is proved by our finding the same structural peculiarity at Brough-law; it may have been intended to give additional strength to walls built of unhewn stones without the aid of lime; and this might be the more necessary at Greaves Ash, where the ramparts run along the brink of a steep hill.

Hut-circles and Dwellings. The area enclosed by the inner rampart has been covered by circular-huts, and a few larger enclosures. Foundations of eighteen of these huts are visible; and there are traces of several more, which are obscured by covering masses of stones and earth.

These hut foundations are for the most part quite circular, their diameters varying from 11 to 27 feet; the usual size is between 16 and 20 feet. Each has a regularly formed entrance, which generally faces the east or south-east. The walls are built in the same manner as the ramparts—blocks of stones are carefully set and fitted into each other, both on the outer and inner face, the space between being filled by smaller stones and earth.

A few of these hut-circles have been cleared, and a description of two of them will more fully show their character. The hut *a*, *Plate 4*, of which a view also is given in *Plate 7*, is 20 feet in diameter and perfectly circular. Only one row of large stones remains of the encircling wall, excepting on the south side, where it is 26 inches high, and formed of two and three irregular courses of unhewn stones; this wall is 30 inches in thickness, built like the ramparts, though with smaller stones. The entrance, which is on the south-east, is $5\frac{1}{2}$ feet wide and is roughly flagged with flat porphyry stones; but one row of these flags is laid across the width of the doorway, at a level of $3\frac{1}{2}$ inches higher than the others, forming a check to a door, which had opened towards the inside of the hut; this provision is not accidental, for we find it in other huts at Greaves Ash, and also at the Chesters. Within the walls of the hut the flagging is continued towards the centre, the distance of 7 feet; and it is also carried round the sides with a breadth varying from 2 to 4 feet; and this side portion of the flagging is raised about 3 inches above the general level of the floor. The remaining space about the centre is roughly paved with small stones.

The hut *A*, *Plate 4*, which was also cleared, is one of the largest, being 27 feet in diameter, and has its entrance on the east. The floor was flagged entirely across the hut for the distance of 16 feet from the door, and the western portion

was rudely paved. In this hut a piece of opalised glass, part of an armlet, was found.

Besides the circular huts in the open area, there are others of a smaller size, and some too of a different form placed against the rampart and even built into it. These were much obscured by heaps of stone and earth. Several of them have been cleared by the excavations; in most, charred wood was found and in two of them fragments of pottery. One of these chambers, *c*, *Plate 4*, on the north side of the principal gateway, is of a rectangular shape, being 12 feet by 10 feet, with an entrance from the gateway by a very rude narrow passage; this may have been a guard house to the gateway. Another rectangular chamber, *d*, *Plate 4*, 70 feet south of this gateway, is partly within the rampart itself, and is nearly the same size as the last, but more carefully formed, the walls presenting a good example of masonry of the same kind as is seen in the outer rampart. A wall, 2 feet 10 inches in thickness, divides this chamber into two compartments; and a large flat stone, which had apparently been smoothed by human agency, stands against the east wall, and had probably been used as a seat. Within this chamber, a considerable quantity of broken pottery was found. In the round dwelling *e*, *Plate 4*, near to this chamber, there were other fragments of pottery, the most remarkable of which is part of the bottom of a jar-like vessel of considerable size, which is represented in *Plate 8*, *fig. 1*.

It seems strange, that while results of fire were discovered in most of the chambers near to the rampart, none was discernible in the larger hut circles. Still, I think, fires have been kindled in these huts also; for we have distinct evidence of fire in a similar hut circle in the Chesters camp; and it is not improbable, that owing to the thinness of the layer of earth covering the floors of these huts, the long continued action of the elements has obliterated the traces of fire as well as destroyed other relics.

A curious discovery has been made respecting fires by the excavations. In the masonry exposed on the south side of the inner rampart, an arrangement of three stones appeared to form a drain; this conduit-like opening, which is represented in *Plate 6*, *A*, is 12 inches high, 14 inches wide at the bottom, and 10 inches at the top. Further excavations were made opposite to it within the rampart, and it was found, that this conduit passed through the whole breadth of the wall and opened into the hut circle *g*, *Plate 4*, which

abutted against the rampart ; the bottom of this conduit is 18 inches below the level of the very rudely flagged floor of this hut. A considerable quantity of charred wood was found within the conduit itself, and within the hut close to it. This opening seems, therefore, to have been a flue ; and here we have a primitive fire-place hollowed out of the floor, and a flue or chimney of rude structure, to carry away, through the rampart, the smoke from fires made of wood.

Gateways. The only entrance to the Fort through the inner rampart is on the east, where there is a gateway $8\frac{1}{2}$ feet broad, the sides being carefully formed of large blocks, some of which are set upright. The entrance through the outer rampart is not opposite, but diagonal to the other, being thirty yards to the southward—an artifice in military tactics, which must have contributed to the safety of the inner portion of the Fort. This arrangement, however, is not unfrequent in Northumberland camps, and Sir Gardener Wilkinson has noticed the same, in early fortlets, in the south-western part of England.

The eastern approach to our Fort has indeed been defended by strong and complicated works, evidencing military skill ; for besides the two great ramparts and their guard-houses at the gateways, there is a third defensive rampart on the east—*Plate 4, D*—through which there is another gateway, where it crosses the road leading from the Fort. This supplemental rampart commences on the south-east corner of the Fort, and extends in a direct line to the eastern Fort, of which it forms the defence on its east side.

The only other entrance into this Fort is through the outer rampart on the north-east corner.

EASTERN FORT.—This Fort—*Plate 4, B*—occupies somewhat higher ground than the one described ; it is much smaller and less complicated in its arrangements ; but, as very large blocks have been used in its construction, its ruins are more striking. Stones forming the rampart are from 2 feet to 4 feet in length ; and even the walls of huts are built with stones as long as $2\frac{1}{2}$ feet.

With the West Fort it is connected by the third rampart—*Plate 4, D*—which defended it on the east, and by circular dwellings and semi-circular enclosures which are scattered over the space between the two Forts. A few of these are shown on the plan ; but, as the ground during the summer, when the plan was made, is much obscured by the rank

growth of ferns, many more could in the winter and spring seasons be traced.

The hut circles here vary in diameter from 8 feet to 20 feet. Four of them have been cleared, and the results proved them to be of the same character as those in the Western Fort. One of the finest examples of a hut is here—*g*, *Plate 4*, 'B'; it is a perfect circle 20 feet in diameter, the walls are formed with large blocks, and the floor is flagged from the entrance, which is on the east, for the space of 7 feet towards the centre of the hut, and the flagging is continued a little beyond this along the sides; the remainder is rudely paved.

A road leads to the Upper Fort, through a well formed gateway on the north-east corner.

UPPER FORT.—This Fort—*Plate 4*, C—is 100 yards further to the north-east on much higher ground than the other Forts, being placed on a high shoulder of Greenshaw hill. A ravine on the east separates the site from similar elevated ground; and a little beyond this, is another ravine down which flows a small stream, which doubtless furnished water to the ancient inhabitants of the place. The ground slopes steeply from the Fort towards the Breamish on the south.

At first sight, this Fort might be classed with the camps cresting the Northumberland hills, and which were more places of temporary refuge than of permanent occupation; there are here rampiers of earth and stone like those around the hill fortlets; but the internal arrangements are more complicated, for the area within is completely filled with the remains of hut-circles, oval enclosures, trackways, and dividing walls. Here too we have bowl-shaped enclosures, which have been deeply hollowed, and the earth and stones excavated used to build high rampiers. The floor of one of these enclosures—*k*, *Plate 4*—is even now 8 feet below the top of the rampier.

The form of this Fort is irregular and somewhat accommodated to the nature of the ground; but all the corners are rounded. Its greatest length is 220 feet from north to south; and its breadth from east to west is 200 feet; but from the hill rising steeply on the northern part, it is narrower there; the area of the whole does not much exceed three-fourths of an acre. A strong rampier crossing it in an E. N. E. direction, divides it into two parts.

There are several entrances; the principal one, the sides of

which are carefully formed of large blocks, is on the west leading down to the lower Forts; another is on the north-east, leading probably to the spring of water in the ravine; and there are four more openings, through the south rampier, on to a fine grassy hill commanding an extensive view over the valley of the Breamish. Along the base of the hill runs the outermost defensive rampart, *Plate 4, G*.

Within this Fort are distinct remains of 15 hut-circles; and there are besides some large enclosures and obscure traces of other circular foundations. Seven of the huts have been partially cleared; and the results prove their characters to be the same as those of the lower Forts. Most of them are flagged and paved; the masonry exposed is of a ruder description, but more of it has been preserved, for in huts, *h* and *i*, *Plate 4*, the walls are from $2\frac{1}{2}$ feet to 3 feet high above the floors. A cutting was made through the deeply hollowed enclosure—*k*, *Plate 4*—without disclosing anything important; but on clearing the hut—*h*, *Plate 4*—which opens into it at a higher level of 5 feet, rude steps were found, ascending from the enclosure into this hut.

A discovery of some interest was made in hut *i*, *Plate 4*, which also is at a higher level than the enclosure to the south-west. It is flagged like the other huts with flattish porphyry stones, tolerably well fitted to each other, so as to form a rude yet not unsuitable floor. Every stone in the ramparts, walls, and floors is of the porphyry of the district, excepting one, and that was found in this hut used as a flag in the floor. Curiously enough this stone is part of a well formed Quern made of sandstone, such as occurs at Titlington, Eglington, and other moorlands of Northumberland.

WATER.—Though there are no wells or springs within the town itself, water was abundant and accessible. Linhope burn was not far distant from the lower forts, and the way thither was strongly defended. The Upper Fort had near to it a streamlet or sike, running in the ravine on the east, and protected by the outermost defensive rampart, which extends at least as far as this streamlet. A spring rises out of the hill side a little northward of the Western Fort, and another issues out of the declivity, near to the south-east corner of the outer rampart, through which there has been a narrow opening to give ready access to this spring.

ROADS.—The principal road—*Plate 4, E*—winds down

the hill from the gateway of the Western Fort to the Breamish; but it is not traceable on the other side of the river. It has the character of an ancient British road, being hollow to the depth of two or three feet, and defended on both sides by a mound of earth and stones. From the west side of the Fort another road—*Plate 4, F*—goes westward towards Linhope burn, and is protected by a stone wall, which is coëval with the outer rampart, being built through it. A trackway, but indistinctly traceable, leads from the north-eastern gateway to the other forts; and another starts from the hollow way, *E*, and, after passing the Eastern Fort, skirts the base of the hill in front of the Upper Fort. Throughout the whole of its course, this trackway is defended on the south by a strong rampart—*Plate 4, G*.

Though the three forts are somewhat detached, they nevertheless form one assemblage of dwellings and fortifications; for not only do the general arrangements connect them together, but a sameness of structure marks the whole. They constitute, indeed, a primeval fortified town—one of the ancient British Oppida—differing, it is true, from our modern notions of a town; for here there are no rows of rectangular houses, with windows and chimneys, no straight streets and lanes; the dwellings are simple circular huts, placed singly, without order, but sometimes in groups,—the passages between are indistinct trackways; but the rude defences are of a massive strength capable of defying the assaults of the elements as well as of enemies. Obviously, therefore, this town was not raised hastily for a temporary purpose; it has been erected by great labour and no little art, and designed as a permanent place of residence which might last for ages. The huts are now roofless, the fires of the hearths quenched for ever, the fortifications levelled; yet these ruins have outlasted the erections of more civilized times, and they still remain to tell us something of the busy population who hunted, tended flocks, tilled the ground, and quarrelled and fought, at a very distant period, in the valley of the Breamish.

On looking at the position of the town in relation to the adjoining hill, we cannot but be struck with its insecurity from an attack on the north, for in that direction it is commanded by Greenshaw hill; and this is especially the case with the citadel or Upper Fort, since the hill rises from it very steeply, and so completely overlooks it, that there seems

no difficulty for an enemy, by rolling down stones from the hill-top, to drive out the inhabitants of the Fort. I have been informed that camps in other parts of England are exposed to the same danger ; and that even some of the old citadels in Greece are overlooked by neighbouring hills. Such, however, is not the case generally in Northumberland, where we find the Celtic dwellings scattered along the sheltered hill sides and upland vallies, but on the summit of the hill, near to them, is the strong fortlet for temporary refuge in the time of danger. Such is the case at Yeavinger, Humbleheugh, Brough-law, Old Bewick, and Beanley. There is, however, no camp either on Greenshaw or Dunmore. Why then is there this seeming neglect of the defences on the north, and why are there so many and such massive and complicated fortifications on the south, which is naturally the strongest aspect ? The problem may be solved by supposing that the land northward belonged to the tribe inhabiting Greaves Ash, and that a hostile tribe would scarcely chose to carry on an aggressive warfare by entering on high, bleak, and stormy mountains ; but that the greatest danger arose from the attacks of rival tribes which inhabited the country to the southward. These arrangements seem to me to countenance the view, that the Celtic camps and fortified towns in this district do not form a combined system of defence against a common foe, but that they are the works of independent tribes to protect themselves against the predatory or revengeful warfare of their neighbours.

Before indulging further in general views, it will be useful to glance at the other older antiquities in this valley, and to state the results of the excavations which have been made into some of them.

Within little more than a bow-shot to the south of Greaves Ash, there are camps and hut circles on Meagrim hill on the opposite side of the Breamish. Further down the valley from half a mile to two miles, are several camps and hut circles scattered over the Hartside hills ; others are on the Reavely grounds, the most remarkable being that on Ewe hill. Opposite to this, with the Breamish between, is Brough-law, which is crested with a fortlet ; and southward of it, on the slope of the hill, are several entrenchments and hut circles ; and not far from these, on the Prendwick estate, is the Chesters camp. Tumuli or barrows, both large and

small, are scattered in considerable numbers over the lower hills.

Excavations have been made into several of the tumuli, and into Brough-law and the Chesters.

Barrows. On the moors between Greaves Ash and Hart-side, and on the hilly ground extending northward, are many low tumuli, which had the appearance of ancient sepulchres; a few of these were opened, but nothing was found to confirm the inference derived from their external shape.

On the Knock, about one mile eastward, two large cairns were opened, and two other tumuli a little northward of them; in all burnt wood was discovered. Probably however the cairns had previously been rifled.

Not far from the Ewe hill camp there are several tumuli; two of considerable size, higher up on the hill, were explored, and yielded burnt wood; and a long barrow, lower down the hill, was found to have a row of stones set upright passing through its middle, two feet below the natural surface; this too contained burnt wood.

Many large barrows are on the Ingram hill south of Brough-law, opposite to the Chesters camp, some of them being 60 feet in circumference, and from 2 feet to 3 feet in height: three of them were opened; in all was burnt wood, and in the centre of one of them, a stone 2 feet in height was standing and around it was strewed the burnt wood. All these tumuli were formed of blocks of porphyry heaped up, mingled with a little earth. These results are not definite, but possibly at some former period these barrows have been opened; for we know that one of the group—a very large one on the top of the hill was taken down between 30 and 40 years ago, and beneath it was found an urn of the shape and with the scorings which characterize Celtic urns. So large was this barrow or cairn, that it supplied a sufficient quantity of stones to build the wall, enclosing the “south plantation,” which has an area of five acres.

Little information has been derived from these barrow explorations; no proofs obtained of inhumation, nor even any bones found; the probable inference from them is, that the early inhabitants of the valley disposed of their dead by cremation, and that a tumulus, or funeral pile, was raised over the ashes; this accords, in some measure, with Cæsar’s account of the sepulchral customs of the Gauls.

Brough-law. The fortlet on Brough-law resembles those on Yeavinger Bell and Humbleheugh, though it is much

smaller. Excepting on the north side, where the hill is precipitous, there are two concentric ramparts of great strength, one of them being as much as 15 feet in thickness. As at Greaves Ash western Fort, the space between the ramparts is divided by cross walls, the entrance is on the east, and the gateways through the two are diagonal to each other.

Within the camp are a few traces of hut circles. Excavations were made into three of them; and in all charred wood was found; in one, pottery was discovered at the depth of 18 inches; and in another, at the depth of 2 feet, an iron knife. Excellent masonry was exposed in the ramparts, of the same character as that at Greaves Ash, but of a greater height—the wall still remains, standing 5 feet high. Here also we find the peculiar method of strengthening the rampart noticed at Greaves Ash, for on the south side, an additional wall three feet in thickness is built against and runs parallel with the main rampart, which is itself 12 feet in thickness.

The hut circles are few; the situation however is exposed and inhospitable; and like Yeavinger Bell and Humbleheugh, it had, I believe, only been used as a place of temporary refuge and defence, by the primitive people whose ordinary residences were along the sheltered hill sides and upland valleys, whensoever an attack was threatened by a hostile tribe or foreign foe.

Chesters. The Chesters camp is on a commanding position, about 2 miles eastward of Greaves Ash. Misled by its name, some have regarded it as Roman; but there is no evidence, either in or about it, of Roman occupation: it was defended by two rampiers, but the outer one is much broken down and obliterated; the inner one is nearly circular, with a gateway or entrance on the east. Hut circles are within this camp, and several rectangular dwellings are ranged along the south rampier. The workmanship of the walls is ruder, than at Greaves Ash.

An excavation was made on the north side of the gateway, where there appears to have been a small guard-house, and within this, broken pottery, charred wood, and a *flint weapon* were discovered at a depth of 3 feet. In a cutting of the same depth near the rampier on the south, the root of a stag's horn was found, and in another part of the camp, bones of a horse. Broken pottery and burnt wood were dug out of most of the rectangular dwellings against the rampier. But the most interesting discoveries were made in a hut circle which

is situated 25 feet west of the inner rampier. This hut is 25 feet in diameter, with an entrance 7 feet wide on the east, with a floor partly flagged and partly paved, and with a course of flags across the door-way raised 4 inches above the level of the floor. Within were found a *green glass bead* and a Quern, and in the centre burnt wood. The entire correspondence in the form and structure of the hut with those at Greaves Ash, warrants the conclusion, that the Chesters camp and the Greaves Ash fortified town belong to the same age and people.

RELICS FOUND.—Pottery. All the pottery found at Greaves Ash, and most of that at the Chesters and Brough-law, are of the coarsest kind, made of common clay, out of which even pebbles have not been removed. This pottery is thick, some fragments being as much as three-fourths of an inch in thickness, plain, and entirely destitute of ornament. It has however been burnt by fire, though imperfectly, for the exterior is a reddish brown and the centre black; it appears to have been fashioned, not by a lathe, but by the hand. Judging from the curve of the fragments and the bottom of one vessel, some of the vessels had been of a large size and shaped like a jar. *Plate 8, fig. 1*, is part of the bottom of a vessel found at Greaves Ash; and *fig. 2* is the bottom of a small pot from the Chesters, which had been 7 inches in circumference. Fragments blackened on the outside by smoke, indicate that some of these vessels had been used for cooking food. This pottery shows a low state of fictile art; but it corresponds with that obtained from Celtic sepulchres in Northumberland, and although destitute of the scorings on sepulchral urns, I do not hesitate to ascribe it to the Celtic race.

A fragment of pottery from Brough-law is thinner, harder, better burnt, and made of finer clay than the other pottery found; but the fragment is too small to guide us to the shape of the vessel, and it would be unsafe to found any conclusion upon it, especially as there are evidences of secondary occupation in this camp.

Glass Bead. The glass bead—*Plate 8, fig. 6*—found in the hut circle of Chesters camp is globular, perforated in the centre, translucent, of a light green colour, and three-fourths of an inch in diameter. Beads occur associated with Roman and Saxon, as well as with ancient British remains; but those of Roman manufacture are usually of elegant patterns and formed of different pieces of coloured glass fused

together; Saxon beads were mostly made of terra cotta, or of earthenware, encrusted with vitreous material. Professor Buckman has shown,* by analysis, that lead is absent from ancient British but present in Roman beads, and that the latter are therefore more decomposed than the former. Tried by this test, the Chesters bead is ancient British, for it is not in any degree decomposed, but is in remarkable preservation. It is a valuable addition to the Celtic antiquities of Northumberland, for, few beads have been noticed in the county. One was found in the railway cutting near Chathill, of a light green colour, ornamented with a wavy line of yellow paste; another was taken from a cist at North Charlton, which contained also a contracted skeleton of a man, a bronze dagger, and a Celtic urn; and a third, similar to that from Chathill, has recently been picked up in a field near to Reaveley. Occurring for the most part, singly, these beads seem to have been used as amulets rather than as personal ornaments. Indeed the ordinary material for such ornaments, among the Celts of Northumberland was gagates—jet or cannel coal.† Traditions of the ancient use of the glass beads may be embodied in their popular names of adder, serpent, and Druid beads. Pliny tells us, that magical arts were cultivated in Britain and that obligations were due to Tiberius for putting down the Druids and ending their monstrous rites. The glass bead appears to have been the charm called by the Druids the *Ocum Anguinum*, which they represented as ejected by serpents into the air by their hissing.‡

Glass Armlet.—The fragment of translucent glass—Plate 8, *fig.* 7—found in a hut at Greaves Ash, is a portion of an armlet; and it is an interesting addition to our earlier antiquities. Such relics are said to occur in Ireland, but they have not before been noticed in England. Two perfect specimens, however, formed of the same material—a kind of white opalised glass, are in the Museum of the Society of Antiquaries in Scotland, and help us to determine the character and fix the age of our relic. One of these armlets was found in 1799 in Flanders Moss, Perthshire, and it is $2\frac{7}{8}$ inches in diameter; the other, which is 3 inches in diameter, was in 1789 taken out of a cairn at Boghead, Kintore in Aberdeenshire, and, it

* *Archæological Journal*, vol. vii. p. 337.

† Fibulæ, or large buttons made of cannel coal, and polished, were found in a Celtic sepulchre at Tosson, near Rothbury, and necklaces of the same material in a Celtic cist, at Humbleton, near Wooler.

‡ Pliny, lib. xxix. c. 12, and lib. xxx. c. 4.

is said, that a necklace was suspended from it composed of three oblong and nine conical beads, made of jet or cannel coal. As such beads are characteristic ornaments of the Celtic race, we may safely infer, that our armlet has adorned the fair form of one of the ancient British females, who lived at a remote period in the valley of the Breamish. And this conclusion as to its antiquity is strengthened by information given by Mr. Albert Way, F.A.S., who has informed me, that he has seen similar glass armlets in Switzerland, which were found with relics from the so called bronze period.

There is no distinct evidence however of glass beads or armlets being of native manufacture; probably they were imported by the Phœnicians, who from an early period traded with Britain for its tin.

Stone Weapons and Instruments.—The stone weapon—Plate 8, fig. 3—found in the Chesters camp, is a spear or javelin head made of common flint, and it is of simple broad lanceolate form, 3 inches long and $1\frac{1}{2}$ inches broad, flat on the one surface but with a sharp central ridge on the other. Affixed to the end of a pole, it might be either thrust or thrown against an enemy. The point is broken, and doubtless, this rude weapon has been used and done mischief in its day. Flint does not occur in Northumberland; but there were, in several parts of Britain, manufactories of stone weapons; one was at Newton, in the county of Durham, where flint implements appear in all stages of manufacture.*

Two other fragments of stone, with cutting edges, were found within the Chesters camp; they are only about half an inch in length, and seem portions of stone knives; one of them is made of common flint, but the other is of ribboned jasper—a mineral occasionally occurring in the district.

Horns and Bones.—Part of the horn of the Cervus Elaphas—the red deer—was found in the Western Fort at Greaves Ash; and the root portion of another, of a large size, was dug out of the Chesters camp near the south side of the rampier. Living, as we know the ancient Britons did, partly on the spoils of the chase, such relics might be expected in their dwellings among the Cheviots, where the deer ran wild even in mediæval times and tempted to the “woeful hunting” immortalised in the Chevy Chase. Hartside has taken its name from the deer, which in the Saxon period bounded over these hills. The remains of a horse found at the Chester consist of the humerus and a few teeth.

* Longstaffe's Durham before the Conquest, p. 50.

Querns.—Of primitive hand mills, three bottom stones were found in the town at Greaves Ash; and an upper and under stone at the Chesters. Three of them are made of a variety of syenite with large crystals, which is abundant enough in large rolled blocks in the channel of the Breamish; and the other two are made of sandstone. The syenitic Querns are rude and clumsy, being 15 inches diameter and 5 inches in thickness. Both sides of the sandstone Quern from Greaves Ash had been used in grinding, for there is a central hole on both surfaces to receive the axle, round which the upper stone would turn. Very probably all the Querns belonged to the tribe which originally inhabited Greaves Ash; but it may reasonably be inferred, that the Quern which has been applied as a flag to a hut floor, was coeval with the primitive people who gave to the town its structural peculiarities.

Miniature Quern?—A curious relic made of a fine grained sandstone, of a squarish form rounded at the angles, was found in a hut circle in the Chesters camp; it is nearly $1\frac{1}{2}$ inches across and rather more than $\frac{1}{2}$ an inch in thickness; the upper surface is flat and has a deepish hole in the centre; the other is somewhat convex; it looks like a diminutive Quern. (*Plate 8, fig. 5.*) I have neither seen nor heard of any such relic. Small circular flat stones perforated in the centre, and with hollows or pits in the disk have been taken out of the Picts houses in Scotland; and perforated stone balls or beads have been found along with remains of an early period, and are supposed to have been used either as weights to the distaff, or as personal ornaments. Our relic differs, however, from these, as the central hole does not pass through the stone; its use cannot with certainty be determined. That it may have been a plaything for children readily suggests itself; yet it would be an odd sort of toy—not likely to amuse. As we have now small appliances for domestic purposes, such as nutmeg graters, why may this not be the bottom stone of a hand-mill for grinding small seeds, which were used as condiments to food? In the middle ages, as the records of the Farne and Lindisfarne monasteries show, there were pepper and mustard Querns; and in the Museum of the Society of Antiquaries for Scotland there are very small Querns—one being only 3 inches across. The idea is but fanciful, yet its expression may be permitted in the absence of more reasonable conjecture.

Iron Knife.—The iron knife—*Plate 8, fig. 4*—found

within Brough-law camp, along with burnt wood at a depth of 2 feet, is considerably oxydised, but doubts may be entertained of its belonging to the original occupants of the camp. It is strong and straight, and has an iron handle which however is imperfect; the blade is $3\frac{1}{2}$ inches long, but of the handle only three-fourths of an inch remains. Knives much the same in size and shape are not unfrequent in Saxon sepulchres; the long iron sword of the warrior was laid on his left side and his knife or dagger on the other.

In forming conclusions regarding the age of the fortified town at Greaves Ash, and the people by whom it was originally erected, assistance should be taken from researches into similar structures. Facts such as those elicited by our excavations may by themselves appear insignificant, but when viewed in connection with more extended observations, they acquire a meaning which enables us to gain glimpses into the history of the past. So little is made known of our early history by ancient writers, that we gladly catch the faintest rays which are reflected from laborious investigations into heaps of stones and ruined walls and houses. Care, however, must be taken to discriminate traces of the original founders from those of subsequent occupants; for the various tides of population, which have successively rolled over our island, have left more or less marks of their progress; and in some localities, Celtic, Roman, and Saxon are somewhat mingled together. In the Chesters camp, and at Brough-law, there are evidences of secondary occupation; but in the Oppidum at Greaves Ash there appears no reconstruction in a changed style—no relics to show temporary occupation after the race who founded it had perished—no trace of the Roman conqueror, nor even the influence of Roman ideas in the construction of the works. This ruined town, therefore, remains an imperfect, but nevertheless unalloyed relic of one of the early British races. It seems to have been quietly abandoned, the inhabitants taking with them their household goods, for no perfect utensils have been left; and it has since not been occupied by another race.

Similar fortified Oppida are in Cornwall, Devonshire, Somersetshire, and Berwickshire. Carn Brac, one of these places, has been described by Borlase and Sir Gardener Wilkinson; its fortifications and hut circles are of the same character as those of Greaves Ash; it dates backward at least

to the Roman era, for coins of British kings, cotemporary with the first Roman emperors, have been discovered within it. Worle camp, with its stone ramparts and hut circles, is also similar;* and another ancient British town, Chysauster, near Penzance, has the same kind of stone walls defending circular and oval huts.† Groups of similar hut circles, but without the protecting ramparts, have been discovered, chiefly in wild moorlands, in Yorkshire, Derbyshire, Roxburghshire and Aberdeenshire.

Sir Gardener Wilkinson considers, that the ancient Britons alarmed by the first invasion by the Romans, erected Carn Brae and other strong camps to protect themselves against this new and formidable enemy. The relics, however, found in the valley of the Breamish, speak of an earlier period than this; and indeed the discovery of the flint weapons suggests the enquiry, whether the Fortlets there may not have been the work of some pre-Celtic race who possessed a low cerebral development and were ignorant of the use of metals? Of such a people, the late Mr. Bateman found remains in great chambered cairns in Derbyshire, which are doubtless among the oldest British sepulchres.‡ But no traces of this race or peculiar tribe have as yet been seen in Northumberland. Whatever may have been the aboriginal people—whether Allophyllian or Celtic,—there appears to have been two great successive immigrations of Celts—one of Hibernico-Celts, with whom it is supposed came the use of bronze, and who after living some centuries in England were driven onward to Ireland by the next population wave. With the later immigration—that of the Cambro-Celts—iron may have been introduced; for we find iron weapons and instruments in not unfrequent use when Cæsar invaded our shores. Between these several periods any hard distinctive line cannot be drawn, for Mr. Bateman's researches among barrows show, that bronze and stone weapons are not unfrequently deposited in the same grave. The material used indeed would depend much, especially in transition periods, on the means of the individual; while the chieftain could purchase the valuable bronze sword or spear, his humble follower may have been unable to procure any better weapon, than that made of wood or stone.

The stones of the walls of the town in Greaves Ash bear

* Somerset Archæological Proceedings, 1851, p. 14.

† Arch. Journal, No. 99, p. 40.

‡ Bateman's Ten Years Diggings into Celtic Graves, p. 93, 144, &c.

no tool marks ; but the Querns have been worked into form by some implement. The central holes of the sandstone Quern for receiving the axle are remarkably smooth, as if worn by a metal ; but it is possible to have reduced this comparatively soft stone into shape by a tool made of harder stone, and a hard wood axle might through time smooth the sides of the hole. The other Querns are however made of syenitic porphyry—a more intractable material ; and I can scarcely think, that any stone instrument I have seen, could have fashioned these Querns into their rounded shape and drilled the holes for receiving the axle. They therefore furnish evidence of some metal, probably bronze, having been in use.

That the fortified town at Greaves Ash belongs to the Celts and probably to that period—some centuries before the Christian era—when both bronze and stone weapons and implements were in use, is therefore, I think, proved, by the rudeness of structure taken in connection with the prevailing circular form both of ramparts and dwellings ; by the character of the pottery and glass amulet which are decidedly of a Celtic type ; by the flint weapons which mark an early period ; and by the glass armlet which in Switzerland is associated with the so called bronze era.

Etymologies by themselves seldom furnish the secure basis of a conclusion ; but they sometimes help to buttress an argument. The Celtic names in the district are few ; yet some of them are footprints of an early Celtic population. *Dunmore*, which is near to Greaves Ash is Hiberno-Celtic or Irish, from *Dun* a hill, and *mor* great ; *Knock*, on which is a large cairn is from the same source, *Cnoc* a hill. *Breamish* too may be derived from the Irish *breim*, which has the secondary meaning of a rattling noise, and *Uisg*, water, which is common to both branches of the language. Perhaps too *Brough*, pronounced here and in Cumberland *Bruff*, has descended from the same period, as *Brug* is in Irish a fortified place. These are but slight indications but they favour the early origin of the fortlets in the vale of Breamish.

Very scanty and imperfect are the notices given by classical writers of ancient British towns. Cæsar tells us,* that what the Britains call a town is a wood surrounded with a vallum and ditch. Strabo's account is similar†—forests are their cities, for when they have enclosed a large circuit with felled trees, they build therein huts and hovels for their cattle,

* Cæsar, lib. v. c. 21.

† Strabo, lib. iv. c. 4.

though not designed for long continuance. Britain, according to Cæsar, abounded in houses nearly like those of Gaul, but of these he gives no description. Strabo, however, informs us,* that the Gauls built their houses of wood, in the form of a circle, with lofty tapering roofs. But that other materials were used in the construction of British houses, we may infer from the account given by Diodorus Siculus, who says† they are of reeds or for the *most part* of wood. These descriptions are far from being satisfactory or complete; they refer more to military camps, or to the temporary residences of wandering pastoral tribes. Remains of huts are scattered over Derbyshire and Yorkshire, which correspond with part of these accounts, for they seem to have been shallow circular pits covered over with wood work and reeds. But the fortified towns such as Greaves Ash were “designed for long continuance,” and were inhabited by settled tribes. The dwellings there were undoubtedly partly of durable stone, for some of the walls are yet from 2 feet to 3 feet high; and as the thickness is from $2\frac{1}{2}$ feet to 5 feet, it may reasonably be conjectured, that when perfect, they would not be less than 5 or 6 feet in height. On these strong walls, the conical roof would rest, made of wood and wattles, and covered over with reeds, straw, or sods. Rude nations not unfrequently adopt this form of building; the ancient huts of the American Indians, and the modern huts of the Esquimaux, are circular—a form indeed which economises material, and is easily roofed and covered with thatch.

Most of the huts at Greaves Ash have the entrance in an easterly direction, partly, it may be, to avoid the strong westerly winds; but as this easterly arrangement is general over the country, both in camps and dwelling, it may have originated in a deeper reason arising out of religious belief and sentiment connected with the worship of the sun.

That the fire was placed in the centre of the huts was shewn, by the excavations at the Chesters; the smoke from the burnt wood escaped as it best could, out of an opening in the roof or through the door; but in one case, as already stated, we find that the fire was in a hollow below the level of the floor, from which the smoke was carried by a rude flue. The raised row of flags across the entrance proves, that the hut was closed by a door, but how formed, whether of wood or of wattle work, we have no information.

* Strabo, lib. iv. c. 4.

† Dio. Sic. lib. vi. c. 7.

Huts or cells, roofed over with stones overlapping and forming a rude approximation to an arch, are seen in the Cloghams in Ireland, in the Picts houses in Scotland and in that remarkable structure Edin's Hall in Berwickshire. As the dwellings against the ramparts at Greaves Ash were covered over with great masses of stones, which might be heaps caused by fallen-in roofs, excavations were made into some of them, but vaulting could not be detected; it is, however, not improbable, but that some of these small chambers had been roofed with stone, of which the traces have been obliterated.

Such is the information we glean of the towns and houses of the Ancient Britons. The Romans, accustomed to the comforts and magnificence of the Imperial City, would feel justified in calling them wretched hovels. But though the state of society was rude and the arts were but little advanced, still some progress in civilization had, even at that distant period, been made in the valley of the Breamish. The wide hills around afforded pasturage for cattle in which "Britain abounded;" the extensive forests of old Cheviot tempted, as we have seen, the hunter to chase the deer; but the tribe was not a wandering one; it had settled within a walled town and was, to some extent, engaged in cultivating the soil, for the Querns found distinctly prove, that corn was grown and used for food. Enclosed lands, south-east of the town, had doubtless been under cultivation; but horizontal ridges high up on the hill sides, which were pointed out by Mr. Carr of Hedgely, appear to be remains of this early culture. Similar ancient terraces occur in the vale of the Tweed, in Peebleshire and other places in Scotland, where they are called *daisses*.* There was a necessity for choosing such elevated spots for cultivation at an early period, since the lower grounds would be covered with swamps and wood. Trunks of trees, frequently found in peat on the Alnham moors, tell of these ancient forests which have been destroyed.

What traces, it may be asked, are there of the religion of these primitive people? Much given to superstition, addicted to magic and under the influence of the Druids, some temples there surely would be, where religious rites would be observed and magical ceremonies performed. Antiquarians of the last century found Druidical remains everywhere; now a reaction from excess has led to the opposite extreme—and

* Robert Chambers, *Proc. of Antiquaries for Scotland*, vol. i. p. 127.

they are found nowhere. Circles of stones, which do not enclose sepulchres, and which are in spots where groves of trees may have grown, are the remains which, with most probability, may be regarded as Druidical temples; to this class the interesting circle at Three Stone Burn may belong; but the subject still requires careful investigation. In the centre of the Western Fort there is a group of standing stones, which, without any stretch of imagination, may be recognised as a place for administering justice or performing religious rites; and in the centre of the Upper Fort, stands a large stone, which we might fancy to have been an object or place of some superstitious ceremony. Fires, rivers, fountains, trees, and *stones* were worshipped by the ancient Britons; and so long did this idolatry linger in our island, even after the introduction of Christianity, that Canute in the eleventh century passed a law prohibiting such heathenish superstitions.

Very sparsely indeed is the valley of the Breamish now inhabited; beyond Ingram there are only seven shepherds' houses and cottages; but during the Celtic period, the numerous dwellings scattered over it indicate a vastly greater population, almost justifying the exaggerated expression of Cæsar when he says, there are in Britain an infinite number of men. Peace and security in our day reign in that valley; but in these ancient times the hill tops bristled with fortresses, and the whole district wore a threatening aspect, and breathed distrust and strife, rapine and bloodshed. These arrangements tell of a divided state of society—of separate tribes and clans, often at war with each other. That Celtic race, though warlike and brave, was weakened by intestine strife, and through want of union, perished beneath the sword of foreign invaders, and the little we know of its character and history has to be gathered from their sepulchres and ruined towns.

Explanation of Plates 4, 5, 6, 7 and 8—

PLATE 4.

PLAN of the Celtic town on Greaves Ash, near Linhope.

PLATE 5.

General view of the Western and Eastern Forts from Greenshaw hill.

PLATE 6.

Masonry of the south face of the rampart of Western Fort, Greaves Ash.

A. Flue through the rampart.

Explanation of Plates, continued—

PLATE 7.

Hut circle, Greaves Ash.

PLATE 8.

- Fig.* 1. Pottery—part of a vessel from Greaves Ash.
 „ 2. Pottery—bottom of a vessel from Chesters.
 „ 3. Flint javelin or spear head from Chesters.
 „ 4. Iron knife from Brough-law.
 „ 5. Miniature Quern? from Chesters.
 „ 6. Glass bead from Chesters.
 „ 7. Fragment of glass armlet from Greaves Ash.
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Notes of a visit to Crailing, in the county of Roxburgh, August, 1861. By D. MILNE HOME, Esq., of Wedderburn.

IN company with Mr. Tate of Alnwick, one of the Secretaries of the club, I paid a visit to caves recently discovered on the property of John Paton, Esq., of Crailing.

They were discovered accidentally, a year or two ago, on the occasion of some rabbits being hunted by Mr. Paton's sons. The dogs having entered a hole in the cliff, the sounds of their barking led to the belief, that the dogs were in some unusual recess, which led to an excavation being made, and to the discovery of the caves. No tradition existed in the district of such caves existing.

These caves, 8 or 10 in number, are situated about half a mile to the west of Crailing house, on the north bank of Oxnam river, a tributary of the Teviot. A sketch of the cliff, representing the position of the caves, will be found on *Plate 9*.

The cliff here is about 80 feet high, and is nearly perpendicular. The river runs at its foot. On the south side of the stream, there is a flat haugh about 300 yards in width, now covered by good pasture, but formerly most probably a marsh.

The caves occupy a line about half way up the cliff, and were concealed by hazel, as well as by rubbish produced by the crumbling of the horizontal red sandstone strata composing the bank.

The caves vary in size; but they are generally about 9 to 10 feet high, about 12 to 14 feet wide, and now about 10 to

12 feet in depth. But it is probable, that since they were made, the cliff has mouldered to some extent, whereby portions of the caves next to their entrances have disappeared.

In a few instances, where the caves were closely contiguous, there are the remains of building,—as if to separate them, and contract the entrances. The stones used were hard and rounded blocks of whinstone, such as now occupy the present channel of the river.

In several of the caves, there were indentations in the rock, apparently for the reception of stobs or poles—some at the entrances, suggesting an arrangement for a door or gate ;—some half way up the walls, suggesting an arrangement for a tier of sleeping places.

In one of the larger caves, there were larger indentations in the floors and in the ceiling, viz. about 3 inches deep and 6 inches in diameter, which would admit of posts large enough for having cattle or horses tied to them, and at a suitable distance from the back wall, to allow of food being put down. There was also a sort of gutter to allow any liquid to run off over the cliff.

Black blotches were apparent on the floors and walls of some of the caves, as if caused by fire.

How access had been got to these caves, when they were occupied, could not be discovered by us. Probably the entrances had originally not been so close upon the edge of the cliff overhanging the river—on which supposition, a road or path a few feet wide might have run in front of the caves and have afforded convenient access. But the cliff, having since been undermined by the river, the whole bank now presents a vertical front.

The following articles were shown to us by Mr. Paton, as having been found in the caves—

An iron spur, with the remains of a star for a prog—much rusted.

An iron knife blade, very much rusted, about 6 inches long.

A tobacco pipe of clay.

Piece of a hair-comb made of horn.

An ivory ring, 2 inches in diameter.

Horses' teeth.

A horn and the leg-bone of a sheep.

Some pieces of burnt wood.

These relics, and the state in which they were, left no

doubt in our minds, that the caves had been occupied by human beings, and probably about two centuries ago.

From the concealed and inaccessible situation of the caves, I also conclude, that the people who occupied them, lived at a period of social disquiet; and that in all probability, they belonged to that class, then very numerous on the Borders, who lived by plunder.

There are many other parts of Roxburghshire where similar caves, of ancient date, have long been known. On our way to Crailing, we observed from the railway carriage two on the right bank of the Teviot near Roxburgh. At Ancrum, two or three miles distant, there are no less than 15 caves,—which are described in the statistical account of that parish. Similar caves occur on the banks of the Jed, above Jedburgh;—on the banks of the Esk, near Hawthornden;—at Crickup Linn, near Closeburn, Dumfriesshire;—at Corby Castle, near Carlisle, and at the Giants' caves, near Penrith. In all these cases the caves are in red sandstone strata,—which have no doubt been preferred, on account of their softness, for such excavations.

With regard to these Border caves, and to the character of the people who occupied them, it is only necessary to consult Redpath's Border History, or Mr. Jeffrey's History and Antiquities of Roxburghshire. In the last mentioned work especially, there will be found an interesting account of the numbers of persons tried at Jedburgh between the years 1400 and 1700, for the theft of cattle and sheep, as well as for robbery, housebreaking, and murder.

The troublous state of these days, is still manifested by many circumstances which arrest attention and court enquiry. The "*Craising Guard*" is one of these. It consisted of a party of soldiers whose special function it was to apprehend and lodge in Jedburgh Castle all persons whose names were in the Roll of persons indicted by the Lord Advocate to be tried before the lords of Justiciary. It was the duty of the same guard, to keep in custody the prisoners during their trial at the Jedburgh Circuit Court,—this guard required to be furnished by the Coroner of the county, and also to escort the judge, and maintain order. To enable this functionary to fulfil his obligations, he had certain lands bestowed on him by the crown, which were held under that express tenure. These lands formed originally part of the large estate of Crailing, which ultimately came into the hands of Lord Cranstoun, upon whose bankruptcy they were sold in differ-

ent parcels. The parcel which was burdened with the obligation of furnishing the guard, was purchased by a Mr. Douglas, and now belongs to a Mr. Scott, who sends two or three armed men to the Circuit Court at Jedburgh, when a judiciary judge comes there to try prisoners.

The following extract from Robert Macfarlane's Geographical collections, published in 1749, illustrates the matter now referred to:—

“The Lord Cranstoun is the coroner of the shire of Roxburgh, since King James VI., and guards the criminal courts there. His servants keep the bar, for which he hath so much of every pannel, and so much of each confiscate.”——“Lord Cranstoun was advanced by King James to the dignity of a Lord Baron for his good services done in the Border, when he was lieutenant to the earl of Dunbar, who was made captain of the guard, when King James went to England, which guard was erected at that time, when the warden office ceased. The last captain of the guard was Andrew Master of Jedburgh, which office, called the Blew Benders, died with him in anno 1628, and was never again revived till the restoration of king Charles II.”

The office of coroner, or crowner in Scotland, was subordinate to that of sheriff. He had it in his power, when the persons to be apprehended were more than usually formidable, to call on the sheriff for assistance.

Account of a Stone Coffin found in the old churchyard of Coldstream Abbey, in a Letter to the PRESIDENT.

*Hope Park, Coldstream,
7th August, 1861.*

DEAR SIR,

At your request, I send you an account of where, and when the Stone Coffin was found, which I pointed out to you last Monday, built into the wall of my stable.

About 30 or 40 years since, I resided in a house at Tweedgreen, close to the isle belonging to the Lees family, and a short distance from where the river Leet enters the Tweed. The ground on which my house was built, and the open space in front, was formerly part of the old churchyard of Coldstream Abbey, and is pointed out by tradition, as the spot where many of the nobles and great men, who fell at Flodden

Field were buried, the Lady Abbess having caused their remains to be conveyed from the battle field, that they might rest in consecrated ground. A road had been made through this open space for the convenience of the neighbouring houses, and had been partly cut out of the bank. In passing along this road, I observed the edge of a hewn stone; I thought at first it might be a window lintel of the old abbey, but on scraping away the earth, I found it to be a stone coffin. I reported what I had discovered to the late Earl of Home, as I did not like to take the liberty of breaking up the road without permission, and in his lordship's presence the coffin was taken up. As far as I recollect, there were no remains of a lid; if there had been any, it must have been very thin, and crumbled away.

The coffin was full of earth, but the skeleton, though very black and decayed, was still exceedingly perfect, the arm bones were crossed over the breast, and the feet seemed to have been doubled up under the hams, as if the coffin was too short. On the back of the skull, I found two or three grey hairs. It was my wish to have had the earth taken out of the coffin in handfulls, in hopes of finding the usual silver coin, placed under the head in Roman Catholic times, and which allows one to guess nearly the date of decease; but the workmen foolishly turned the coffin upside down. Immediately under the stone coffin was found another skeleton, quite perfect, with three wounds on the skull. One on the right side had been caused by a cut of a battle-axe or sword, the bone was cut through and the wound had been closed up by a new growth of young bone. A medical gentleman present said, the wound must have been made about three years before the time of death. A second wound seemed to be that of an arrow, the skull being ground out from the frontal bone to the top of the head. A third wound was a small triangle opening in the right temple, and seemed to have been the death wound. This skull was sent to the Hirscl. Except a stone coffin found in Kelso Abbey, and another at the Hirscl, and the one I showed you, I am not aware of any stone coffin cut out of *one solid stone* being found in this district, but it is not uncommon to find graves made with flags at each side, and smaller ones at the head and foot. Such a grave was opened in a field, about a quarter of a mile up the Dunse road from my present dwelling, in which was found a short sword, but no bones. The late Dr. Weatherhead, on whose property it was found, had the sword for

many years, but his things were all sold, and where it has gone to now, I cannot tell.

In cutting a tank for the gasometer a few years since, immediately behind the house I lived in, where the stone coffin was found, the workmen came upon a trench filled with human bones. They seemed to have been huddled in in a hurry, and among them I found the blade of a table knife, very much decayed. Within a yard or two of the trench, a skeleton was found about a foot below the surface, and a silver coin of Edward IV. was found under the head.

I am, dear Sir,

Yours respectfully,
A. M'LAREN.

To David Milne, Esq., of Milne Graden.

List of some of the rarer Insects taken during the summers of 1860 and 61, at Hetton Hall. By WILLIAM B. BOYD.

Dromius fasciatus
 „ quadrinotatus
 „ foveolus
 Lebia chlorocephala
 Dyschirius æneus
 „ thoracicus
 Cychrus rostratus
 Carabus glabratus
 „ nemoralis
 Nebria nivalis
 Patrobus excavatus
 Ancomenus fuliginosus
 „ piceus
 Olisthopus rotundatus
 Abax striola
 Pterostichus strenuus
 Amara spinipes
 „ fulvipes
 „ tardus
 Bradycellus placidus
 „ similis
 Trechus rubens
 „ lapidosus
 Bembidium æneum
 „ Bruxellense
 „ Schuppellii
 „ fuscipes
 Phalacrus corticalis
 Liodes rufipennis
 Heterocerus marginatus

Catops clavicornus
 Cateretes urticae
 „ bipustulatus
 Cryptophagus ulicio
 Rhizophagus bipustulatus
 Atomaria fuscipes
 Latridius lardarius
 Antherophagus silaceus
 Byturus tomentosus
 Georyssus pygmeus
 Byrrhus varius
 Simplocaria semistriata
 Dendrophilus punctatus
 Aphodius contaminatus
 „ merdarius
 Ægialia globosa
 Serica brunnea
 Anomala Frischii
 Elater minutus
 „ balteatus
 „ holosericeus
 Anathrotus niger
 „ vittatus
 Atopa cervina
 Cyphon marginatus
 Telophorus ater
 „ pulicarius
 „ pallidus
 „ bicolor
 Baris atriplicis

Sphærola Lythri
Mecenus semicylindricus
Gymnætron Beccabungæ
Rhinonchus castor
Ceutorhynchus guttula
 " *Quercus*
 " *Troglodytes*
Cryptorhynchus Lapathi
Orchestes Fagi
Tachyerges salicis
 " stigma
Anthonomus Ulmi
Notaris acridulus
Dorytomus fumosus
 " salicinus
Hypera nigrirostris
 " dissimilis
 " variabilis
Leisomus ovatulus
Barynotus mercurialis
Sciaphilus muricatus
Memoicus oblongus
Phyllobius verdicollis
Apion carduorum
 " subulatum
 " immune
 " punctigerum
 " virens
Deporaus Betulæ
 " nanus
Salpingus ruficollis
Sphæriestes ater
 " immaculatus
Rhagium bifasciatum
Crioceris melanopa
Galeruca californiensis
Luperus flavipes
Haltica Modeeri
 " flexuosa
 " rufipes
 " Helxines
 " oleracea
Thyamis lævis
Macronema Sperguli
Phædon Betuli
 " cocheariæ
 " tumidula
 " aucta
 " fastuosa

Chrysomela Litura
 " Hyperici
Helodes Beccabungæ
Cassida rubiginosa
Chilochrus bipustulatus
 " renipustulatus
Coccinella sedecemguttata
 " oblongo-guttata
 " ocellata
 " dispar
 " bipunctata
Blaps mortisaga
Anaspis melanopa
Notoxus monoceros
Anthicus fuscus
Oxypoda luteipennis
 " longiuscula
Megacronus analis
Ischnosoma splendens
 " lepidus
Bolitobius pigmæus
 " angularis
Tachyporus testaceus
Conurus littoreus
Staphylenus nebulosus
 " pubescens
 " latebricola
 " ænocephalus
Raphirus Boops
 " picipennis
 " ruficollis
Cafius xantholoma
Othius pilicornis
 " angustatus
Gyrohypnus cruentatus
 " sulcifrons
Philonthus fulvipes
Rugilus orbiculatus
Stenus fulvicornis
 " tenuicornis
 " lineatulus
 " pilosulus
 " bimaculatus
 " Kirbyi
Bledius subterraneus
Acidota rufa
Omalium florale
Lampyrus noctiluca or Glow-worm,
 frequent on roadsides.

Taken by REV. W. LAMB, *at Ednam Manse, near Kelso.*

Sesia fuciformis.

Insects taken by MISS MILNE, at Otterburn, last summer.

Colias edusa, on white clover	Chærocampa Porcellus, on Rhododendron
Deilephila Euphorbiæ, on Rhododendrons	Macraglossa stellatarum on Rhododendron.

Plant new to the district, found by MRS. JOHN BAIRD, of Beaumont Hill.

GOODYERA REPENS; in old fir plantation at Graden, and also EPIPACTIS LATIFOLIA in the same wood.

Notice of a Roman Quern found at Berwick.
By JAMES PATERSON.

AT our late most interesting Alnwick meeting, the members had an opportunity of inspecting a number of Querns or hand-mills of the ancient British period, and I have the pleasure of now directing their attention to the under half of a similar instrument of genuine Roman origin. This form of grist-mill is of great antiquity, drawings having been found among the hieroglyphics that cover the stones of ancient Egypt, and descriptions or allusions occurring in the ancient Hebrew Scriptures of mills of the same kind. In Eastern countries they are used to the present day: the singing of the women as they rise early to grind the corn for the need of the day, falling musically upon the ear of the awaking traveller. We can hardly view such relics of primitive life without recalling the "two women that shall be grinding at the mill," the prohibition to "pledge the upper or nether millstone," or the affecting episode in the African history of Mungo Park, when the compassionate negress sung—

"No mother has he to bring him milk,
No wife to grind his corn."

We believe that Querns are found in this country, dating to many widely-separated epochs—Celtic, Roman, Saxon, Danish, mediæval. When Pennant made his tour of Scotland, at but a comparatively modern date, he found the hand-mill still in use in the remote districts of both Lowlands and Highlands.

These implements vary considerably in form; in some

cases being quite or nearly flat, in others hemispherical ; and some, as in the one before the meeting, seem to have had a slight edge raised around the lower stone ; while in later examples this is so enlarged, as to make the lower a sort of trough in which the upper moved.

That this is of Roman origin is proved by the material—a sort of trachyte from a quarry on the Rhine, and from which all the Roman ones were procured.

The members will remember a specimen of the stone from this quarry, lying by the window on the lower floor of the Romano-British Museum at Alnwick Castle, and will recognize its identity with the Quern now before them.

This Quern was found at Berwick in 1855. While the drainage operations were being prosecuted, an out-fall was made a little to the north-west of the flag-staff by directing a tunnel through the walls and adjoining gardens, a distance of about 55 yards, and about 60 feet from the shore ; and at a depth of 12 feet from the surface, a mass of large boulder stones had to be removed, and with these stones the Quern before the meeting was brought to the shore. Circumstances prevented its removal at the time, and on my return some time afterwards, no trace of it could be found. On the 29th of August last, when passing along the shore accompanied by Mr. Murray of Hawick, it was again discovered within a few yards of the spot where, six years ago, it had been laid aside with scrupulous care for preservation.

We have therefore I believe, in the stone before us, a relic of the Legionaries of Italy, and from other evidences in our neighbourhood, there is a strong probability that Berwick occupies the site of one of their ancient stations on the banks of the *Tueda*.

Obituary Notice of the Rev. John Baird, of Yetholm.

By ROBERT EMBLETON.

It is with deep regret, that I have to report to the club, the death of one of its original founders, the Rev. John Baird, of Yetholm. He was the eldest son of the Rev. James Baird, and was born at the manse of Eccles, in the year 1798, and died at Yetholm, on the 29th of November, 1861, in the 63rd year of his age. He received the first rudiments of his education at home, and subsequently attended the Grammar School at Kelso ; from thence he proceeded to the University of

Edinburgh, where he completed the studies necessary for his future ministerial duties. From overwork, he was attacked with hæmoptysis, for the cure of which, a sea voyage was recommended. He proceeded to Gibraltar, the coast of Spain, and Newfoundland, on board a ship of war, where he performed the duties of tutor to several midshipmen. On his return, he was licensed by the Presbytery, and went to Ireland for two or three years, in connection with the Presbyterian Church in Ireland. On his return he was ordained to the church at Yetholm, where he continued until his death, a period of 33 years. His health had, for a considerable time, been very precarious, and a visit to Ireland during the past summer was not attended by any improvement. The nature of his disease, seemed very doubtful, but apparently it was some disease of the stomach of a malignant form, which terminated in a state of pure anæmia. As a preacher he was simple, impressive, and at the same time eloquent, and never failed to command the attention of his hearers. His kindliness of heart, and untiring discharge of his duties as a clergyman, his unwearied exertions towards the amelioration of the condition of the gipsies, and his services in general towards his people, especially in regard to the young, procured for him the love, confidence, and respect of all classes, and all ages.

“The service past, around the pious man,
With steady zeal, each honest rustic ran;
E’en children followed, with endearing wile,
And pluck’d his gown, to share the good man’s smile,
His ready smile, a parent’s warmth exprest,
Their welfare pleased him, and their cares distrest.”

In conversation, amongst those he knew, there ran a rich vein of quiet humour, which a stranger would in vain have looked for, under his somewhat quiet and retiring manner. As a botanist and geologist, his knowledge was neither superficial nor confined, although of late years he had not pursued either with much zeal. He was chosen President of our club in 1837, and through our transactions are scattered many of his observations.

He was the author also of a paper on the Geology of the Rock of Gibraltar and the adjacent country, which was published in the 7th vol. of the *Edinburgh Philosophical Journal*; and of another on the Rocks in the neighbourhood of St. John’s, Newfoundland, printed in the 4th vol. of the *Transactions of the Wernerian Society*.

Notice of Cælopa frigida, observed at North Sunderland, on February 15th, 1861. By REV. F. R. SIMPSON.

AT North Sunderland, on a bright clear day, with the snow scarcely off the ground and the thermometer at 32° Fah., we were visited with a swarm of Flies, (*Cælopa frigida*). They covered the front of my house, and were thinner on the south side of the church and do not seem to have extended further eastward; but so dense a swarm crossed the village to the west, as to attract the attention of children and induce them to give chase. The wind was due south, and the course of the Flies was nearly due north.

Regarding these Flies Mr. Hardy states that they are identical with *Cælopa gravis* of Haliday, Ent. Mag. i. p. 167. They inhabit marine rejectamenta in vast numbers, at all seasons. The sea had been rough from the 9th to the 12th of February; this and the snow may have roused them from their haunts. They seldom appear inland; at Holywood near Belfast Bay, Mr. Haliday sometimes found them abundant on the flowers in the orchard. At Penmanshiel, three miles from the sea, *Cælopa simplex* (Hal.), frequents, now and then about April, the blossoms of the sallow.

PROCEEDINGS
OF THE
BERWICKSHIRE NATURALISTS' CLUB.

Address delivered at Berwick on the 26th of September, 1862,
By JOHN B. BOYD, Esq., of Cherrytrees, President.

GENTLEMEN,

It has always been a duty imposed on the President to give, at this our Anniversary Meeting, a detailed account of the observations and discoveries made by the Club during the past year. I am sorry to say that I have been unavoidably prevented from attending most of the meetings, which, although it deprived myself of much pleasure, is so far fortunate for the club, as it has thrown me entirely on my friend, our able and indefatigable Secretary, Mr. Tate, who has kindly supplied me with minutes of our several meetings, much fuller and more accurate than I could have written, and which, I am happy to say, has rendered my office a sinecure.

I have also to thank Mr. D. M. Home for his notes on the Dunse meeting; and Mr. Jerdon, for his botanical observations made at Jedburgh.

Our last Anniversary Meeting was held at Berwick, on September 26th, present—The President, Messrs. John Clay, P. Dickson, W. Dickson, R. Douglas, R. Home, J. Landale, W. H. Logan, J. Paterson, W. Stevenson, G. J. Williamson; J. C. Langlands, J. Church, W. Church; Capt. McLaren, and Sir G. Douglas, Bart.; Drs. Douglas and Turnbull; Revds. Dixon Clarke, W. Darnell, W. Greenwell, G. H. Hamilton, John Irwin, and W. Proctor; as visitors, Wm. Darnell, jun., and Wm. Proctor, jun.

The accounts for the past year were examined, and the subscription for the next year was fixed at 6s. After examination of the accounts and arrears of subscriptions still unpaid, it was resolved, that the Transactions shall not be sent to members until their arrears be paid. It was also resolved, that those members who are in arrear for three years with their subscriptions, shall cease to be considered members, unless their arrears be paid within three months after an application from the secretary. It was also agreed, that at least 500 copies of the Annual Transactions be printed for this year.

The times and places of meeting for next year were fixed as follows:—the last Thursday of the months of May, June, July, August, and September:—1st, at Jedburgh; 2nd, at Berwick; 3rd, at Chatton; 4th, at Dunse; 5th, at Berwick.

It was also resolved, that the thanks of the club be given to the Dukes of Roxburgh and Northumberland, for their great kindness and courtesy to the club in opening their mansions and grounds for the benefit of the club.

Mr. James Bowhill, banker, Ayton, was proposed as a member of the club.

The President then read his annual address, and nominated as his successor, Mr. Boyd, of Cherrytrees.

Mr. Paterson read a paper on a bronze Celt, by Mr. Murray, of Hawick. Mr. Paterson also handed in a paper on a Quern, found in the old walls of Berwick, which he exhibited.

The members after breakfast proceeded to the north of the pier, and examined the formation of the strata for a distance

of about two miles, returning by the post road as far as the entrance to Castlegate, when they went down the banks to the river side and returned to the town. The President and Mr. Stevenson accompanied the party, and gave an interesting exposition of the geology of the strata.

The first Field meeting of the year 1862, was held at Jedburgh, on the 22nd of May. This being the first visit of the club to this old and interesting Border town, the meeting was well attended, notwithstanding railway arrangements rendered it necessary for members, coming from a distance, to arrive at Jedburgh on the day preceding the meeting. There were present :—The President, Messrs. Embleton and Tate, secretaries ; Drs. Douglas, Robson, Scott, Marshall, and Mackenzie ; the Revds. J. Walker of Greenlaw, Wm. Lamb, Wm. Darnell, G. H. Hamilton, and J. Irwin ; Messrs. Home, Langlands, F. R. Wilson, J. Scott Dudgeon, Wm. Boyd, Thos. Fryer, Robert Douglas and P. Clay ; and as visitors, Mr. Geo. Hilson, Provost of Jedburgh, Messrs. Alex. Jeffrey, Arch. Jerdon, John Hilson, Chas. Anderson, Wm. Elliot, James Cumming, J. B. Kerr, Jas. Tait, Dr. Ballantyne, Mr. Oliver, and Master Marshall.

After breakfast at the Spread Eagle hotel, an able paper on Jedburgh was read by Mr. A. Jeffrey, F.S.A., Scot., author of the History of Roxburghshire. The party then proceeded to an old house in Backgate, which, through the courtesy of Miss Armstrong, they were permitted to examine. It is a quaint relic of the fifteenth century, and is especially interesting as having afforded an hospital to the unfortunate Queen Mary, after her visit to Hermitage Castle. The little bed-room occupied by her, during an illness of six weeks, was seen ; but a well worn piece of tapestry, laid on the floor, is all that remains of the furniture which was in the room, when she was there. A visit was next paid to the old bridge at the foot of the Canongate, which at one time was guarded by a gateway, and which tradition says was built before the Abbey. Passing the house, in which the distinguished natural philosopher Sir David Brewster was born, the party entered the

Lady's yard, formerly the property of the Abbey ; and here were seen several ancient pear trees which had been planted by the monks, and which are still producing fruit in their old age.

Under the guidance of Mr. Jeffrey, the fine old Abbey was examined with great interest, and the age of the several parts of the venerable structure was discussed. Situated near the Borders, it was frequently more or less damaged by Border warfare, but having been at different times repaired, the building presents the architectural features of several different ages. The oldest portions are in the late Norman style of the 12th century, of a highly ornate character ; the doors, especially the northern one, are remarkably rich in their sculptures. Some other portions are Transitional and Early English ; but the principal restorations are in the Decorated style of the 14th century. In Saxon times a church stood here, subject to the see of Lindisfarne : and two sculptured stones, which very probably formed part of that older structure, are built into the walls of the present Abbey—one of them forming the lintel of a window in the second story of the chancel. A relic of the same period, the base of a cross, which had been removed from Jedburgh, is now in the Hartrigg grounds. Though much decayed by time, there can still be traced the rude figure of an animal and some interlacing work.

Leaving the Abbey, the party walked up the Jed, and examined with great interest the geological formations exposed in the channel and banks of the river. Opposite to Allars Mill is the instructive section to which Dr. Hutton's description has given a world wide celebrity ; for here is seen an unconformable junction of the Cambro-silurian and old red sandstone formations ; the former rocks are thrown into a vertical position, and on their upturned edges, the sandstone rocks are deposited in nearly horizontal beds. Such junctions had been observed before, but Hutton was the first who rightly unfolded their meaning. He saw that these primary strata, (the Cambro-silurian,) after having been

formed at the bottom of the sea, in planes nearly horizontal, were raised so as to become almost vertical, while they were yet covered by the ocean, and before the sandstone had been deposited upon them. And he saw too, that as fragments of the primary rock included in the sandstone, are many of them rounded and worn, the deposition of the latter must have been separated from the elevation of the former by such an interval of time, as gave room for the action of waste and decay.*

Since the period when Hutton uttered his bold generalizations, Sir Roderick Murchison has unfolded additional evidence of the long lapse of time between these two formations, for he has shown, that there intervenes the era, during which were deposited the thick silurian beds with their numerous organisms. Though these beds are absent from Roxburghshire, they are largely developed along the Welsh Borders. Excepting "morsels of black vegetable matter" noticed by Mr. D. M. Home in his geological account of Roxburghshire, no fossils have been found in the Cambro-silurian rocks of Roxburghshire, though films of metallic oxides, assuming a dendritic form have been mistaken for "very distinct impressions of plants." In the same formation, however, in Berwickshire, Mr. Stevenson has found *Graptolites*. The soft friable condition of this red sandstone, caused it at one time to be grouped with the new red sandstone; but in Mr. D. Milne Home's Memoir, it is rightly classified as the old red or Devonian; for the question as to its age was decisively determined by the discovery of *Holoptychius nobilissimus* and *Pterichthys major*, characteristic Devonian fishes, in Fernihirst quarry and elsewhere in Roxburghshire.

Following the Jed upward, the party wandered through scenery of great beauty, heightened at this season in gorgeousness, by the rich blossoms of the fruit trees. They lingered for awhile beneath the Capon Tree, a very large old oak tree,

* Playfair's Illustrations of the Huttonian Theory, p. 51.

one of the last remains of the great forest of Jed, and discussed the origin of the name. That it is derived from the resemblance of the tree to a monk's head with a *cowl-on*—literally “cape-on,” was generally doubted; for there are Capon trees elsewhere to which the explanation does not apply. Near Brampton, by the road side, is a Capon tree, under which, according to popular tradition, a cold collation, of which the principal dainties were capons, was provided for the judges of assize, when met there by the authorities of Carlisle. Reference is made to a Coban or Capon tree, which may have stood near to Alnwick Castle, in the following rhymes sung by girls while playing at “keppy ball,” in order to divine their matrimonial fortunes:—

Keppy ball, keppy ball, Coban tree,
Come down the long loanin' and tell to me
The form and the features, the speech and degree
Of the man that is my true love to be.

Keppy ball, keppy ball, Coban tree,
Come down the long loanin' and tell to me
How many years old I am to be.

One a maiden, two a wife,
Three a maiden, four a wife, &c.,

the numbers being continued as long as the ball can be kept rebounding against the tree.*

Capon, Coban, and Covine are several names for the same tree, the letters p, b, and v, being interchangeable. Dr. Jamieson defines Covine tree, as “a large tree in front of an old Scottish mansion house where the laird always met his visitors;” and this corresponds with the more general meaning, which was suggested by Mr. Robert Home at the meeting, that the name comes from the “kepping,” or trysting tree.

Still following the Jed upward, the party visited the Douglas camp, situated near to Linthaughlee House, on a high ridge with steep scaurs on two sides, and which, though used by

* I am indebted to Mrs. Busby of Alnwick for this old rhyme. G. T.

forces during the middle ages, had originally been one of the ancient British fortlets. Crossing the deep dene and ascending to the top of a high scaur, the remarkable caves of Lintalee, formed in the soft sandstone, were examined; they are similar to those at Crailing, which were described in last year's proceedings. The appearance of the caves here, confirms the opinion expressed by Mr. D. Milne Home in his paper as to their comparatively modern origin, for within the inner cave the tool marks in the rock are but little worn by time; and the percolation of water, through the porous sandstone, would render such caves altogether unfit for permanent human occupation.

The party then wended their way to Old Fernihirst, the Castle of the Kers, erected in 1490; though battered down with cannon in 1523, its

"battled keep
Still towers embosomed in the wood
Where now all warlike echoes sleep."

It has been converted into a farm-house. After examining the towers and apartments of the castle, the party returned to Jedburgh in time for dinner, passing in their route "The King of the Wood," a great oak tree 80 feet high, another of the remnants of the Jed forest, and Fernihirst old red sandstone quarry, in which fish remains are found.

The ground passed over was not productive of natural history objects of much interest.

Mr. Jerdon furnishes the following Botanical notes:—

The club did not meet with any new or rare plants, the productions of the old red sandstone formation, which forms the valley of the Jed being, as Mr. Tate observed, not generally of an interesting character. On the old Abbey of Jedburgh, the wallflower (*Cheiranthus Cheiri*.) was observed growing very luxuriantly; and in a hedge at Inchbonny, *Chelidonium majus* was noticed. This latter plant, however, was certainly an outcast from a garden. In the glen, or dene, at Tintalee, *Aspidium aculeatum* was seen on the banks in some abundance, and also *Stellaria nemorum*, by the

side of the little brook, in great luxuriance. This *Stellaria* appears to be local in its distribution, as some of the members had not seen it before. In the dene was also observed, but sparingly, *Milium effusum*. A *Hieracium* was growing on the scaur below the Lintalee cave, probably *murorum*, as the stem was nearly leafless.

On proceeding to Fernihirst, the locality of *Gagea lutea* was searched, but without success, and Mr. Jerdon mentioned, that for the last two or three years he had been unable to find the plant, so that it is apparently lost at this station. *Veronica montana* was observed by the river side in some abundance. In returning to Jedburgh, Mr. Jerdon pointed out some plants of *Geranium lucidum*, on an old wall near Fernihirst, and also *Bartramia pomiformis*, sparingly, on another part of the same wall. The common wood and roadside plants of this season were in great beauty and profusion.

After dinner, a paper giving an account of the opening of two Barrows at Ford, by the Rev. W. Greenwell, was read.

Mr. James Bowhill, of Ayton, was elected a member, and the following nominations for membership were made:—Professor Simpson, Edinburgh; Thomas G. H. Burnet, Newcastle; John Hilson, Jedburgh; Chris. Allan, M. D., Wooler; John Scarth, Manderston, Dunse; Septimus Smith, Norham; John Paxton, Norham; Robert Weatherhead, Berwick; John Harrison, County Architect, Newcastle; Thomas Mason, Pallinsburn; Rev. J. B. Strother, Berwick; Robert Ballantyne, M. D., Jedburgh; Alex. Jeffrey, Jedburgh; Charles Anderson, Jedburgh; John Hume, Jedburgh; Henry R. Hardie, Stoneshiel, Ayton; Geo. Hilson, Provost of Jedburgh; Arch. Jerdon, Jedfoot, Jedburgh; Wm. Elliot, Jedburgh; James Tait, Kelso.

The second Field meeting of the year was held at Berwick, on the 26th of June. There were present—Messrs. Ralph Carr, D. M. Home, Chas. Watson, Matt. Culley, P. Clay, Robert Douglas, J. Paterson, Wm. Stevenson, B. Nicholson, F. G. Collingwood, G. J. Williamson, Geo. Tate, Sir John Majoribanks; Revds. G. H. Hamilton, P. G. M'Dowal, J. B.

Strothers, J. W. Dunn, Robert Jones, J. D. Clarke, Wm. Darnell, Geo. Rooke, S. A. Tyler; Drs. C. Douglas, Wm. Mackenzie, D. H. Somerville; and as visitors, Mr. Coxe of Eglingham, and Mr. Johnston of Marlfield.

A voyage along the coast either to the Farne Islands, or St. Abb's Head, was to have been the chief object of the meeting; for Mr. Williamson, one of our members, had kindly offered the use of his vessel for the purpose. He accordingly sent it off from London, one week prior to the day of meeting, but, unfortunately, contrary winds prevented the vessel reaching Berwick in time for the meeting. The arrangements were therefore altered; one party sailed in a steam vessel, provided by Mr. Williamson, up the Tweed as far as practicable, and afterwards strolled along the banks of the river; another went along the coast northward of Berwick; and a third party crossed the Tweed at Spittal, and after looking at an important collection of Fish remains obtained by Mr. Paterson from the shales connected with the coal seams of the district, they proceeded southward and examined the complete section of mountain limestone rocks, exposed along the coast, from the mouth of the Tweed to Goswick. Leaving the coast, they went inland to Berwick Hill colliery, and spent some time in breaking out of the shales lying around, the scales, teeth, and other remains of fish which lived during the carboniferous era. As an account of the section and of the fossils in the several rocks will hereafter be given in a separate paper, it need only be mentioned here, that one of the interesting discoveries of the day, was a specimen of *Spirifer bisulcatus*, in a shale near Hudshead, showing distinctly the calcareous spiral coil, which supported the fleshy arms of this Brachiopod. In this state *Spirifers* are rarely seen in the Northumberland beds.

The members proposed at the last meeting were elected, and the following nominations were made:—Rev. John Collingwood Bruce, L.L.D., F.S.A., Newcastle; Mr. John Tate, Bilton House; Mr. Robert Crossman, Chiswick House, Beal; Rev. J. B. Roberts, Shilbottle; Rev. Peter Mearns,

Coldstream ; Mr. W. Watson, Thames Street, London ; Mr. John Spottiswoode, of Spottiswoode, Lauder ; Mr. J. M. Meggison, Berwick ; A. Brown, M.D., Coldstream ; Mr. David Page, Edinburgh ; and Mr. Bailes, Scremerston. Mr. D. Milne Home proposed, and Mr. Tate seconded, that Lady John Scott be elected an extraordinary member of the club.

After dinner a paper was read by Mr. Ralph Carr of Hedgely, on the present participle in the Northumbrian Dialect, and on the verbal nouns or nouns of action, terminating in *ng*.

Mr. D. Milne Home remarked on the meteorology of the district, and a discussion ensued, during which Mr. Wm. Stevenson gave explanations of the causes of the difference of temperature between high and low grounds in very cold weather. Mr. Tate gave a report of the day's explorations along the coast. And thus passed away a day, which, notwithstanding disappointments, supplied much material for thought, proving indeed that however often Berwick may have been investigated, there yet remains a wide field of research.

On the 31st of July—one of the few warm summer days which have this year occurred in the North of England—the third Field meeting was held at Chatton. There were present—Messrs. Prideaux J. Selby, J. C. Langlands, Wm. Boyd, Robert Embleton, Geo. Tate, Arch. Jerdon, Henry R. Hardie, Wm. Elliot, Matt. Culley, Geo. Culley, M. Dand, J. Fryer, Ralph Huggup, Capt. Selby, R.N. ; Drs. Marshall, C. Douglas, Robson Scott, C. Allen ; Revds. Geo. Thompson, J. S. Green, Wm. Darnell, Robert Jones ; and as visitors, Rev. Wm. Hodgson, M. Wigram, Mr. Wood, and Messrs. Wigram and R. H. Jones.

After a substantial breakfast at the hospitable mansion of Dr. Marshall, the party proceeded to explore the district ; and first they ascended Chatton Law, a rugged and steep sandstone hill, with a considerable area of comparatively level ground on the summit, the western end of which is occupied by a strong ancient British Fort, defended by three rampiers.

The view from it is extensive, and, within a radius of less than two miles, six other camps of the olden times can be seen. But the most interesting objects on this hill, are some curious and mysterious sculpturings on the scalp of rocks protruding from beneath the soil. One of these is within the camp, and the other is about 200 yards to the eastward of it. These sculpturings are incised concentric circles with a central hollow, from which a straight incised line or groove proceeds through the series of circles and beyond them. They are of the same family character as those on the Routing Linn, Doddington, and old Bewick stones; but the largest figure is seen at Chatton Law; for one there is three feet in diameter, and consists of seven concentric circles.

After leaving the Law, one party took the direct route to Chillingham; but another, under the guidance of Mr. Langlands, crossed the wild moorlands, passing by ancient fortlets, cairns, and sepulchres to Ros Castle, the highest sandstone hill in the district, and rising to the height of 1000 feet above the sea level. This hill is crested with a camp, whose age is indicated by its name; for both words are Celtic, *Rhos* meaning moist land or a moor, and *Castell* being a late Celtic word for a fortress. After enjoying for a while the magnificent view which this height commands, the party entered into Chillingham Park and examined Hebburn Tower—one of the Peles or Bastiles, as they are called, which are peculiar to the Border land—grim, square, massive buildings, once the strong residences of the lesser barons and gentry, but now deserted and crumbling away. With ruined walls clad with ivy or crusted with lichens, they are picturesque features in the landscape, but they vividly remind us of the time, when before the Union of England and Scotland under one sovereign, such strongholds were necessary for the protection of life and property against Border marauders.

Chillingham Park, one of the most beautiful in the north of England, is enclosed by a high stone wall, and contains, it is said, about 2000 acres. The ground is undulating and somewhat broken; woods clothe the hill sides and clumps of

trees are scattered over the park, yet within it are broad and rich pastures, tenanted by deer and by the celebrated Wild Cattle—"mightiest of all the beasts of chase." Of these cattle there is now a herd of more than sixty. A good view was obtained of them; their colour is white, excepting that the eyes, eyelashes, and tips of the horns are black; the muzzle is brown, and the inside of the ears red or brown; their shape is considered fine, the legs being short and the back straight. They are supposed to be the pure descendants of the aboriginal wild cattle of the country; the problem of their origin however is as yet unsolved; it may turn out that they are merely a variety of our ordinary cattle, preserved by inbreeding and by destroying such calves as are born differing from the common type. Their resemblance to the feral cattle of one part of the Falkland Islands, has given a new interest to the question; and as Earl Tankerville, in accordance with suggestions made to him, is causing a record to be kept of the births, sexes, deaths and causes of death of these animals, and has also supplied a skull and other bones to Professor Rütsnegen, who is studying, with great care, the skulls of recent and extinct oxen, we may, ere long, obtain a more exact knowledge of the origin and history of the Chillingham wild cattle.

On leaving the Park, a passing look was given at Chillingham church—an old solemn structure, still retaining in its doorway the original Norman piers, capitals, and arch; and at the elaborate and beautiful tomb, within the Grey porch, erected to the memory of Sir Ralph Grey of Wark, who died in 1443. Chillingham Castle was next visited, which as well as the Park was, through the courtesy of Earl Tankerville, opened to the inspection of the club. Its situation, embosomed among woods, is delightful, but externally it has neither the massiveness of the old Gothic castle nor the elegance of a modern mansion. Most of its architecture belongs to the Elizabethan period, but some portions of the old towers, erected in the 13th century are preserved; there is still a narrow prison, to which light and air are admitted only by a

narrow slit in a thick wall ; and beneath it, many feet down, is the dark dungeon to which there was access by a trap door through the prison floor. Letters rudely cut on the prison walls, and some rows of long and short lines, are records of wretched prisoners immured here, and of the weary days passed in captivity. The interior of the castle presents more pleasing objects ; for here are some of the finest paintings in the county — original portraits of Charles I. and II., of Bacon, of Jeffreys, of the Grey family and of many others, including productions from the pencil of Godfrey Kneller, Vandyke, Reynolds, Landseer, and other distinguished artists.

From the castle the party returned by the direct route to Chatton ; and after dinner the members proposed at last meeting were elected ; and the following nominations were made, viz. :—Rev. James Dand, Ancroft, and Mr. William Crawford, Dunse.

The following papers were read :—one from Mr. James Hardy, of Penmanshiel, containing a list of the Border Lichens ; an account from Rev. F. R. Simpson of an ancient British Cist discovered at North Sunderland ; and a history of the Battle of Flodden Field, by the Rev. Robert Jones of Branxton. Mr. Geo. Tate afterwards gave an account of excavations, recently made into the antiquities of Yevering ; and it was resolved, that a special meeting of the club be held on the 15th inst., at Yevering, to examine the excavations. Mr. Wm. Boyd shewed to the meeting a goose egg, having another egg within ; it was laid, along with a number of others of the same kind, by an old goose at Boutrigg in Roxburghshire ; and both the inner and outer egg were perfect so far, as each had a “yolk and white.” Mr. Ralph Huggup shewed a number of flat circular perforated stones, found at Shorestone along with hard burnt red pottery with an incised pattern ; such stones have generally been regarded as weights for ancient spindles. It was also stated that Mr. James Hardy, of Penmanshiel, had discovered two insects new to Northumberland from a fungus on alder, in the Lilburn ; viz., *Carida flexuosa*, and *Orchesia micans*.

A special Field meeting was held at Yevington on August 15th, to examine the excavations which the club, aided by the liberality of his Grace the Duke of Northumberland, had made into the antiquities of Yevington Bell. There were present:—the President; Messrs. Matt. Culley, Wm. Boyd, Jas. Grey, J. C. Langlands, Thos. Mason, J. Paxton, Geo. Tate, C. Rae, Wm. Wightman, and F. R. Wilson; Drs. C. Douglas and Allan; Professor Simpson, of Edinburgh; Rev. J. C. Bruce, L.L.D.; Revds. P. G. McDougal, J. S. Green, J. Roberts, and F. R. Simpson; and as visitors, Rev. J. Bigge, of Stamfordham; Revds. S. Wigram, Hodgson, and A. Stewart, Killin, Argyleshire; Messrs. G. Rea, Robert Busby, Thos. Tate, J. Wykeman Archer, London, Chas. Borthwick, Mr. Elliot, and Master Langlands.

After breakfast with the Rev. J. S. Green, vicar of Wooler, the party proceeded to New Yevington, and thence began the ascent of the hill. Mr. Tate, under whose directions the explorations were conducted, guided the party and gave expositions at each digging, of the character of the antiquities examined, and of the relics which had been discovered. Barrows, hut-circles, fortlets, and the great fort on the summit of the Bell, were visited in succession; and the proceedings of the day were much enlivened by the discussions which were carried on over every excavation. By Professor Simpson much interesting information was communicated, respecting similar antiquities in Scotland. Of these researches a full report will appear in our proceedings.

After dinner at Wooler, the relics found were shown and described. The members proposed at last meeting were elected; and Mr. Geo. Rea, of Middleton House, was nominated for membership.

The fifth Field meeting was held at Dunse, on the 28th of August. There were present:—Messrs. D. Milne Home, Wm. Stevenson, Chas. Watson, J. Waite, Wm. Crawford, John Turnbull, Wm. Boyd, T. Landale, H. Hardie, Robert Home, Robert Douglas, A. Jerdon, Alex. Jeffrey, Wm. Oliver, J. Fryer, Geo. Tate and John Tate; Dr. C. Douglas;

Professor Campbell Swinton; Rev. P. Mearns; and as visitors, Lord Polwarth, Major M. Campbell; Messrs. Thos. Tate, Bilton House, G. M. Innes, and Master Fryer.

The principal object of the day's proceedings was to examine the remarkable ridges of sand and gravel, called "Kaims," at Bedshiel, at Oxendean and in the Dunse woods. The party were guided by Mr. D. Milne Home and Mr. Wm. Stevenson, both of whom are well acquainted with the locality and its geological features. Unfortunately the day was unfavourable to minute observations, for the party, during the whole of their walk, were exposed to drenching rains.

After dinner, Mr. Geo. Rea, who was proposed at last meeting, was elected a member; and the following nominations were made:—Mr. David Ferguson, Dunse; Mr. James Wood, Dunse; John Lait, M.D., Dunse; James Falla, M.D., Jedburgh.

Admirably executed military sketches, taken by Mr. Smith of the Royal Engineers, of Odin's or Edin's Hall, and of the encampments on Bunkle edge, were laid before the meeting, accompanied by a descriptive account from Major Hope Smith.

The following are Mr. D. Milne Home's notes on this meeting:—The chief object of this day's meeting was to inspect the Kaims, which had been referred to in the President's address of last year, when he described the view from the top of Cockburnlaw where the club held a meeting last year. These Kaims consist of elongated ridges of drift, standing up, on the general surface of the country, with steep sides, and attaining sometimes a height of 50 or 60 feet. There being a number of these remarkable objects in the neighbourhood of Dunse, it was intended, according to the programme, to visit those in the woods of Dunse Castle, and also the more extensive development of them on a moor about six miles west of Dunse. At breakfast Mr. D. M. Home, by means of a series of plans hung up on the walls, gave a verbal exposition of their physical features and their internal structure, and also

adverted to the various theories of their formation. After breakfast, the party proceeded in an omnibus and other conveyances to the farms of Bedshiel and Cattleshiel, on which the longest line of Kaims is situated. The examination commenced at the west end, from which looking eastward, a good view is obtained of the whole line, stretching through a low lying plain, for about three or four miles. The line is as a whole concave towards the hills which are to the north; but the curve is not regular. In different parts there are very sharp turnings, amounting even to a right angle, which it is on any theory most difficult to account for. It is very evident, however, that whatever was the agent which formed this singular ridge, the whole line has been originally continuous—now it is broken up in one or two places, at each of which a stream crosses the line. The most important break has been caused by the river Fangrist, and there the interval extends to about 250 yards.

The party were met by Mr. Thompson, the steward on Marchmont estate, and two labourers, who had come by direction of Sir Hugh Campbell, the proprietor, to open out for the inspection of the club such portions of the Kaims, as might be wished, for the study of their internal structure. Several old quarries were with this view stopped at and examined; and in these, the geological members of the party entered on an instructive discussion. It was seen that the Kaims were composed of gravel and sand, disposed in regular layers or strata. The gravel consisted of the various rocks of the country, greywacke, porphyry, basalt, and old red sandstone. Mr. D. Milne Home mentioned, that the greater part of the gravel could have come only from the west or north, and as the fragments were much rolled, must have come from a distance. These Kaims are from 30 to 60 feet in height above the adjoining surface of the country, and with sides at the steepest places forming an angle with the horizon of about 15° or 20° . The gravel seemed to be coarsest at the west; and there was most sand towards the east end, where it has been largely quarried for building purposes. No

organic remains are known to have been discovered ; but it has been said that a few small bivalve shells had been found near the east end, on or below the level of the moss. From the description given, they appeared to be recent, and to belong to the genus *Cyclas*. Mr. Stevenson of Dunse undertook to make further enquiry regarding them.

It appeared to the members present quite manifest, that the notion of these Kaims having been the moraine of a glacier, as supposed by the late Dr. Buckland, was untenable. Their internal structure showed that the materials composing them, had been brought and laid down by water ; though in what way it is very difficult to understand. Considering the great length of the line of these Kaims, and their great height, the agent must have been on a large scale. As the drift covering the whole country contains gravel and sands, of the same character, the inference is that these Kaims must have been formed when the land was covered by sea. Reference was made to the "*spits*" of gravel and sand known to be formed off Yarmouth and also off the coast of Dorset ; in the former case by the action of currents or tides, in the latter case by the action of the waves and the prevalent south-westerly gales. Another theory was suggested, that if the land emerged suddenly from the sea, the waters would rush off, in a direction more or less easterly, in parallelism with the direction of the Lammermuir and Cheviot hills, and would wash away the drift, except in certain localities, where it would be left in long ridges. It was observed, that the general course of all the Berwickshire Kaims was east and west, and several of them showed, at their west ends, a high crag which would protect the drift on the east side of it from the action of the retiring waters. It was mentioned by Mr. D. Milne Home in proof of the numbers of these Kaims in Berwickshire, and of the popular interest excited by them, that a number of estates and farms were called after them—as the estate of Kaims in Eccles parish, and the farms of Kaim Knowe, and Kaim Flat, near Kelso. Lord Kaims, celebrated in the last century as a Scotch lawyer, was the

proprietor of that estate. It was conjectured that the word *Kaims* was derived from the Scotch word signifying a *comb*, on account of the shape of the ridge. One of the Kaims in Dunse castle woods bears the popular name of "The skart-ing Kaim," on account of the broken or jagged outline, caused by some remarkable terraces on it.

It now, gentlemen, only remains for me to thank you, for your great kindness, in appointing me to the honourable office of President. I am afraid I would have been a most inefficient one, in any circumstances, but I am sorry to say that family distress has prevented me attending your meetings, during the year, and doing even the little that I might have done.

JEDBURGH.

By ALEXANDER JEFFREY, F.S.A., Scot.

JEDBURGH is a town of great antiquity. Before the Roman eagle appeared upon the heights of the Cheviots it existed as a British town, and during the Roman period, one of the stations of the Watling Street, which runs through the district, was in the immediate locality. When that mighty people were called away to defend their own hearths and altars from the Gothic hordes, it became, under the name of REGED, the capital of URIEN, the cherisher of bards, "the shield of his country," who reigned in the hearts of the Romanized Gadeni, and who carried his flaming sword into Northumberland to meet the Saxon Ida. When this great warrior fell by the treachery of Morkin, the King of Strathclyde, he was succeeded by his son Owen, whose sword stopped the victorious career of the Northumbrian king. Notwithstanding the valour of the civilized Britons, they were at last overcome by Ethelfrid, and his successor Edwin established the Saxon power from sea to sea. It was during this period of fierce conflicts, which lasted for many years, that the *Catrail*, which runs from the Rink camp, on the peninsula between the Tweed and Gala, to the Peelfell on the sources of the Liddel and Jed, was formed by the Romanized

Britons to aid them in repelling the Saxon invader. After the time of Edwin's success this district was incorporated with the kingdom of Northumberland, and continued to form a part thereof till the end of the tenth century, when it became the property of the king of Scotland. Few glimpses are obtained of its condition during the Northumbrian period, till about the beginning of the ninth century it is seen as the property of Ecfrið, who was bishop of Lindisfarne from 829 to 845. He is said to have been a man of noble birth and ample possessions. In the work which passes under the name of Simeon of Durham—but the real author of which is understood to be Turgot the prior of Durham—written about the end of the eleventh century, it is said that Ecfrið built the towns of Jeddeword, and bestowed them upon the see of which he was bishop.* Little is known of the history of the district for a considerable time after it formed part of Scotland, but about 1097, the town under the shelter of the castle had risen to be a burgh and royal domain. At the death of Edgar it became the property of his younger brother, the pious David, who both previous to and after his becoming king resided here; and Earl Henry his son dated a charter at Jedburgh. Malcolm IV., who loved the southern borders well, delighted to dwell at his castle on the Jed, where he died in 1165. His brother, William the Lion, also made it his residence, and where he granted many charters before 1214. King Alexander II., the "devout, upright, and courteous prince," also made it his abode, from whence he dated many charters. The town and its pertinents with other lands were, in 1221, settled on Johanna his wife, the sister of the English king. Here Alexander III. met the English deputies, and after repeated conferences, which lasted three weeks, concluded peace, his army at the time lying in the adjoining woods, said by historians to be the most secure retreat for individuals and armies. A son was born to him in the castle of Jedburgh, and named Alexander. In 1282 the marriage of the Prince of Scotland with Margaret, the daughter of Guy, the Earl of Flanders, was solemnized here, on the sabbath day after the feast of St. Martin. "The feast of this marriage," says the chronicler, "was holden with great triumph and solemnity continuously for the space of fifteen days together." The prince died in the following year. In October 1285, the same king was married here to Jolind,

* Ecfrið was also the founder of the church of Norham, about 830. *Anglia Sacra*, vol. i. p. 698.

daughter of the Count of Dreux, in presence of all the Scottish and many of the French nobility.* The old annalists say the town was selected for the nuptials on account of its lovely situation and the beauty of its woods and river. Although the giants of the forest have nearly ceased to exist, the locality is still full of scenes of surpassing beauty, and will well repay the visit which the club are about to make to it. When Edward I. swept over Scotland like a destroying angel, the members of the corporation of Jedburgh took the oath of fealty to him in 1298.† The seal attached to the Declaration has for the device—azure, an unicorn tripping argent, ringled, maned, and horned. These arms were to be seen on the market cross during the end of the last century, and a few years ago I had the pleasure of discovering the unicorn beneath a heap of rubbish in a cell of the old prison ; but through the carelessness of those in authority, it has been broken, and a few fragments in the museum are all that remain of the arms which surmounted the ancient cross of the burgh. The cross itself was taken down a number of years since, with the view of improving the streets of the town, and portions of the shafts put to the ignoble use of supporting a turnpike gate. One part of it is now to be seen near to Hartrigge, the mansion of Lord Campbell.‡ Who can help lamenting the demolition of the time-worn memorial associated with the history of the burgh from its first erection. Were it only for what took place at it in 1571, it ought to have been held sacred to the community. At that time a pursuivant was sent from the newly-created authority in Edinburgh, to proclaim their letters in Jedburgh, which had always been favourable to the young king. On his arrival, he mounted the cross, and proceeded to read the letters to the multitude congregated in the streets, who although not acknowledging the authority that sent the herald, heard him patiently till he came to that part which bore that the lords assembled in Edinburgh, had found all things done against the queen null, and all men should obey her only ;

* Fordun, x. 40. Hollenshead's Chronicle, vol. ii. p. 407. Heywood's Hierarchie of the Blessed Angels, Book viii.

† Prynne, p. 655.

‡ The name of this place was formerly Stewartfield, and was changed by the late Lord Campbell to Hartrigge, on acquiring the estate. It is to be regretted that the name was altered, as there can be no doubt the name of Stewartfield was conferred upon it at a very early period. In all the burghs of the king the Stewart had allotted to him a field and a mansion, and it is probable that this place was the Stewart's field.

but no sooner had he uttered these words, than a storm of popular feeling arose, and the provost, after abusing the queen, caused the herald to come down from the cross, and made him eat the letters he had partly read; and in order that he might be paid his wages, unloosed his points, and gave him his "wages on his bare buttocks"* with part of a bridle rein. Buccleuch and Ferneherst threatened to revenge the insult put upon their authority, and marched upon the burgh with 3000 men. The provost called out the *staffis*, and offered battle, but this the supporters of the queen declined, and hearing that Ker of Cessford was hastening with a chosen band to aid the burghers, retired into the neighbouring fastnesses.

When Robert I. secured the independence of Scotland, he granted a charter to the burgh for the gallant services rendered by the community during the struggle, and especially on the field of Bannockburn. A flag taken by the Jeddart *staffis*, at this battle, is in the museum of the town. The same king granted the territory to the good Sir James Douglas, his favourite warrior. Before 1329 the same king granted a charter in favour of James Cunningham, of the territory of Hassendean on the Teviot, which was dated at Jedburgh. There are also traces in the town council records of a charter having been granted by one of the Jameses. It was in existence in the 17th century. In 1556 MARY gave a charter to the town, proceeding upon the narrative that the burgh, which had been a free royal burgh, endowed with many privileges, liberties, and advantages, and as such was held and reputed from time immemorial until lately, when it was, by the inroads and invasions of "*our old enemies the English*," burned, torn down, and laid waste, whereby the evidence and infestments of the same were destroyed and taken away, so that the provost, baillies, councillors, and community of the same, require to suffer heavy loss in their privileges and liberties belonging to said burgh, unless provision be made against the same;—that the same burgh is situated near the borders of the kingdom, and a place of refuge to residents and inhabitants of the county, as well in time of peace as war, and affords aid in resisting rebels; no other royal burgh within the county, nor any other place, so convenient and suitable to protect and receive the liege men of the kingdom for the resistance of English enemies

* Bannatyne's Journal, p. 243.

and rebels ; for these considerations Mary anew erected Jedburgh a free royal burgh perpetually, and gave to the provost, baillies, councillors, and *commonality* of the same, all the common property which formerly they had ; and to the burghesses and inhabitants full authority, free power, and special license to buy and sell wine, wax, woollen and linen cloth, broad and narrow, and every other kind of merchandise and goods, and to have and hold within the said burgh millers, bakers, flishers, hangmen, and slaughterers of flesh and fish, and every other artificer pertaining to the privileges and liberties of a free burgh ; to have within the burgh perpetually in all time coming a market cross and weekly market days on Monday and Friday, and free market days annually in the day of exaltation of the holy cross in autumn, and during eight days of the same, with a common market annually on the festal day of Pentecost, and with tolls, customs, privileges, liberties, and advantages, free market days appertaining to a free royal burgh, in whatever way in the future, and as freely as “ our burgh of Edinburgh, or any other royal burgh, is infeft within the kingdom by us or our predecessors.” By the charter also a power was given to the magistrates and office-bearers of the burgh, to seize and arrest every person committing or resetting theft within the burgh ; to bring them to the notice of an assize or assizes, and to drown, hang, and justify them, &c. From this it will be seen that Jedburgh is, by this charter, raised to an equality with any burgh in the kingdom. The charter was ratified by Parliament in 1599, and the ratification proceeds on the same narrative as the charter.

The burgh was the residence of Mary the queen in 1566, and where she held a justice court and assembled a parliament. While Mary resided here, she occupied a house in the Backgate. The room in which tradition says she slept, is on the third floor in the back part of the house, looking into a garden. Some old tapestry, which it is said covered the walls of the room at the time, is still exhibited. While in this house Darnley visited her after she became convalescent, and remained one night in the town. The queen was attended by a number of the principal men of the kingdom, and by secretary Cecil of England. On leaving, she was escorted to Kelso—where she held a court—by a thousand of the Border chivalry.

The burgh was also the place where the armies of Scotland assembled, and it was from the earliest times the seat of the

courts of the king for the administration of justice to an extensive district. But so unruly and numerous were the accused parties and their friends, that it often required the presence of the king with an army of 6000 men to enforce obedience to the law. In 1510 James IV. placed 200 of the clan Turnbull at the bar with halters round their necks, several of whom were hanged, others imprisoned, and the rest dismissed on giving hostages for their future good behaviour. And here I may advert to the reproachful phrase of "Jeddart justice," or, "*hang a man first and try him after.*" In cases of treason, where the accused party was dead, it was the practice to place the corpse or the dry bones at the bar before the assize, lead evidence, get a verdict, and pronounce sentence in the same way as if the person had been alive. The dead bodies of the Earl of Gowrie and Alexander Ruthven were produced at the trial, and sentence pronounced in presence of the corpses. The bones of Logan of Restalrig, which had been in the grave for many years, were dug up and placed at the bar on the trial, and sentence pronounced as if he had been alive. Trials of this kind were very frequent during the time of the persecution. Henry Hall of Haughead, on Cayle, was tried in this way. After the battle of the Pentland Hills, the authorities in Scotland had recourse to a new process:—that of trying in absence parties accused of being present in that action. After this trial it was not deemed necessary to produce the corpse or the bones at the bar. On this change of practice Lord Hailes remarked:—"The bones of a traitor can neither plead defences nor cross-question witnesses, and upon this matter there is no difference whether the accused person be absent in body or present in bones." Morton, in his *Monastic Annals*, adopts the view of preceding writers, that it was the severity of George the fourth Earl of Home, the father of one of the abbots, that gave birth to the proverb; but it is evident that it was not the severity of the law, but the peculiar manner in which it was administered in a class of cases, that gave rise to the obnoxious phrase. In short, the form of trial was resorted to, to enable the iniquitous government of the day to bestow the estates of the deceased, who had probably been shot on the hillside, on its willing tools.

The CASTLE of Jedburgh, which existed during the 11th century, stood upon the site of the present prison. It was of great extent and strong. David I. had a garden within the castle. On Edward I. being appointed referee in the dis-

putes which followed the death of Alexander, and having obtained seizin of the kingdom in order that he might give effect to the judgment, committed the castle to the keeping of Laurence de Seymnor, and in the same year it passed into the hands of Brien Fitzallen. In 1295 John Baliol delivered it for security to the Bishop of Carlisle, and the Abbot of New Abbey, while the English king was absent in France. In 1297, Sir William Ruthven, the governor of Jedburgh, and Sir Christopher Seton, took it from the English. In 1304 Edward was at Jedburgh and the castle again in his hands. After changing hands repeatedly, the commons of Teviotdale rose *en masse*, took the castle, and razed it to the foundations. When the English king possessed the castles of Jedburgh, Roxburgh, and Hermitage, he commanded the whole country by a chain of forts from the Solway to the German Ocean.

In the same street with the castle, is the house in which the unfortunate Charles Stewart resided on his way to England in 1745. It was then the property of Ainslie of Blackhill on the Jed. The family of Ainslie is seen in connection with lands on the Jed, from the beginning of the 13th down to the end of the 17th century. The prince had a number of adherents in Jedburgh.

At the foot of the Canongate, a fine old bridge with deep ribbed arches spans the river. The date of its erection is uncertain. The style of building and material would lead to the belief that it is coeval with the abbey.

There are no very old houses in Jedburgh owing to the destruction of the town in the inroads of Surrey, Hertford, Eurie and Laiton. The inhabitants of Jedburgh were well known in Border warfare. Surrey, who knew them well, says they were "the boldest and the hottest" that ever he saw of any nation, and that he could not take the town as long as any portion of it afforded the means of defence to the inhabitants, and even after the town was burned, the defence was continued among the burning ruins. The battle of the *Red swyre* was among the last of their feats in arms. The weapon which they used in battle was called a *staffe*, described as a stout stake shod with iron, the iron being four feet long.

Jedburgh is famous for its MONASTERY. The exact time of the first foundation of a religious house has not been ascertained with any degree of certainty, but there can be little doubt that a church existed here at a very early period. On

the accession of Constantine in 306, the religion of Christ may be said to have been established throughout the Roman empire; and eight years after, three of the Roman provinces of this island were represented at the Council of Arles by three bishops, each accompanied by a presbyter and deacon.* The Romanized Britons of Valentia, in the centre of which we now are, were converted by St. NINIAN at the beginning of the fifth century. He founded the monastery of Whithern, and it is thought that his diocese extended over the whole province. After the Romans left, the fierce contests for possession of the territory would greatly retard, if not entirely stop the progress of Christianity till the pagan Saxons also embraced the new faith. It is reasonable to think that during the time of Ninian a succession of teachers would be sent out from Whithern, not only to instruct the intellects of a rude people, but to live amongst them and erect little churches in the glades of the woods. When Oswald ascended the Northumbrian throne in 634, he asked and obtained a bishop from I to instruct his Northumbrian subjects. The Scottish Aidan was consecrated for the mission, and got from the king the isle of Lindisfarne for his episcopal seat. But as Aidan did not understand the tongue of the Anglo-Saxon people, he preached in Gaelic, and the king acted as interpreter. In a short time the subjects of the pious Oswald were converted, and churches built throughout the land. Before 845 the possessions of the church of Lindisfarne were augmented by the gift of Bishop Ecfrið of the two Gedewordes, with the churches thereof, and a large tract of land in Teviotdale.† It is therefore certain that a church was in existence here during the beginning of the ninth century, and never afterwards ceased to exist.‡ Dempster, in his *Ecclesiastical History of Scotland*, says, that at the end of the tenth century there existed a monastic institution at this place of which one Kennoch was abbot, and that he was afterwards regarded as a saint, and his festival kept on the fourteenth of November of each year. After the translation of the episcopal seat from Lindisfarne to Durham in 995, the authority of the bishop over the district gradually declined; yet there is reason to believe that the church retained some authority

* Lloyd's *Ancient Church Government*, p. 72. *Caledonia*, vol. i. p. 315.

† *Hist. Eccles. Dunelm.*, Lib. ii. cap. v.

‡ Mr. Innes, in his work "*Scotland in the Middle Ages*," gives only Mailros as existing in this part of the country during the 10th century, but he is clearly mistaken, as the gift of the bishop shows.

over Jedworth in 1093, from the fact of Turgot, the prior of Durham, ordering the body of Ealduf, one of the assassins of Bishop Walcher, to be cast out of the church in which he had been buried.* On the ascendancy of David I., Teviotdale was annexed to the bishopric of Glasgow, and John the tutor of David was preferred to the see in 1115, by whose advice and assistance canons regular of the order of St. Augustine were brought from Italy and established at Jedburgh. Wynton places the settlement in 1118, and Fordun in 1147. It is thought Wynton is right as to the first arrival of the canons, and that the house, which was at first a priory, may have been changed into an abbacy about the date mentioned by Fordun. In a charter of David I. to Coldingham in 1139, DANIEL is styled Prior de Geddwwride, and in 1150 OSBERT designs himself Prior de Gedworda. He is one of the witnesses to the confirmation charter (1153—1168) of Malcolm IV. to Walter Fitz Alan of Birchinside and Leggardswode, and styled "Osbert Abbot of Jeddeworde." He died in 1174, and his death is recorded in the Chronicle of Mailros as the first abbot of Jedwood. The dedication of the church was commemorated on the "vii. *Idus Julii*."†

The munificent founder gave to the house the tithes of the two Gedworth's, Lanton, Nisbet, and Creling, the town of the earl Gospatrie, and in the same town a ploughgate and a half, and three acres of land with two houses; also the tithes of the other Creling, the town of Orm; and of Scraesburgh; the chapel situated in the forest opposite Hernswinglaw; also Ulfston near Jedburgh, Alnelive near Alncrumb, Crumsethe and Raperlaw; the tenth of the game taken in Teviotdale; the multure of the mill of Jedburgh; pasture for the cattle in the king's forest and right of taking wood and timber for the use of the monastery; the village of Rule Harvey, Edwordslee, a salt work near Strivilene, a house in the town of Roxburgh, and another in Berwick with a fishing.‡

From Malcolm IV. the monks got the churches of Barton and Grenden in England; a toft and seven acres in Jedworth; a fishing above the bridge of Berwick and exemption from custom on their wine imported into that town.

The monastery had also many lands and churches conferred on them by many barons and others Scots and English.

* Hist. Eccles. Dunelm, Lib. iv. cap. viii.

† Acta. Parl. Scot. vol. i. p. 7. Notice of the Ayr MS. of the Ancient Laws of Scotland.

‡ Confirmation charter of Earl Henry.

William the Lion confirmed all preceding grants and gave additions ; Robert I. granted five charters to the canons with a confirmation of all charters of David I., Malcolm IV., William I. and Alexander I.

For seventy years the canons of Jedburgh enjoyed their privileges without molestation or any challenge of their independence. But the abbey lying within the diocese of Glasgow, the bishop claimed obedience from the abbot and his brethren. The canons disputed the bishop's right and declined to yield obedience ; at last the disputes were referred to the arbitration of five referees, Lord Hugh of Leuhine, Master Stephen of Lillieslif, Master Hugh de Potton, Master William of Ercheldune, and Lord Robert de Hertford, who met in the little chapel at Nisbet on the Teviot, in October 1220, before many auditors ; and after both sides were duly heard, the referees decided that the abbot and his canons were bound to obey the bishop in all matters canonical saving their mutual privileges. This curious document is engrossed in the Glasgow chartulary, and I regret that my limits will not allow me to give it at length.*

In little more than another seventy years the abbey was involved in all the miseries of Border warfare. During the succession wars the greater portion of the abbey was destroyed, and to such a condition were the monks reduced, that they had to be billeted on other houses in England. The cloisters were laid in ruins, and the great tower of the church, with the exception, perhaps, of the north wall, was knocked down. After the independence of the kingdom was restored, Bruce strove to repair the abbey and make it habitable for the monks, but it is thought that it was near the end of the fifth century before any important improvements were effected. In 1523 Surrey took and burnt the abbey ; what remained was again destroyed in May under the direction of the Earl of Hertford. It received another visit in September following. It is singular to notice that while the unfeeling Hertford was destroying the abbey, the abbots of Jedburgh and Dryburgh were, along with the earls of Home and Bothwell, in England, and burnt Horncliff on the Tweed, and destroyed Thornton and Shoreswood.

At the Reformation the monastery was dissolved and annexed to the crown. At this time the revenues of the abbey were estimated at £1274 10s. Scots money ; 2 chalders and 2

* Registrum Glas. vol. i. p. 97.

bolts of wheat; 23 chalders of barley; 36 chalders, 13 bolts, 1 firloft, and 1 peck of meal. The Kers of Ferneherst were bailies of the canons of the abbey, and in 1587 the king granted to Sir Andrew Ker the bailiary of the lands and baronies of the monastery. In 1622 James VI. converted the estates of the abbey into a lordship for Sir Andrew Ker under the title of Lord Jedburgh. The Marquis of Lothian now possesses the lands.

Owing it is supposed to the devastations of "*our old enemies the English*," there are no books or papers of any kind relating to the monastery, at least none have as yet been discovered. The history of the house has to be gleaned from the records of other houses, and the charters of the kings and other benefactors of the canons. The abbot must also have been the custodier of the titles of the nobility, as occasionally receipts are met with on depositing of writs in his hands for safe custody. The names of the abbots so far as known were:—Osbert 1150—1174, Richard 1174—1192, Ralph 1192—1205, Hugh 1205, Henry 1239, Philip 1239—1249, Robert de Gyeslaw 1249—1249, Nicholas 1249—1275, John Morel 1275, William 1314, Robert 1322, John 1338, Robert 1358, Walter 1444, Robert 1473, John Hall 1478, Thomas 1493, Henry 1507—1511, John Home 1513.

In walking up the Jed the club will arrive at the Capon tree, a large oak on the banks of the river, and supposed to be the last remnant of the giants of Jed forest. The land on which the tree stands formerly belonged to the abbey, and was called Priorsbaugh. It is thought that the name is derived from its remarkable resemblance to the hood worn by the monks, and was called a capon. The tree measures 21 feet above the roots; about 10 feet up it divides itself into two branches, which measure respectively $11\frac{1}{2}$ feet and 14 feet. It is about 80 feet high and covers fully an area of the diameter of 92 feet. It is impossible to fix the age of this beautiful tree, but if I were to hazard an opinion it would be, that the tree is upwards of 600 years old. The king of the wood—another large oak—stands on the top of the bank to the south of the Capon tree, and rears its spiral top to the height of 80 feet. Its girth is 18 feet at the root, and at 15 feet high, $11\frac{1}{2}$. Both trees belong to the Marquis of Lothian, who is adopting means to preserve the existence of the Capon tree. The trees are figured in Gilpin's forest scenery.

A short distance from the Capon tree is Lyntalee, the place selected by the good Sir James Douglas as his strong-

hold. He could not have chosen a more beautiful and secure retreat. "On the east is a precipitous rock of about 100 feet high, washed at its base by the Jed; on the north a deep ravine runs up from the Jed to the table land between the Jed and the Rule; on the south a deep glen winds from the river Jed to the Sueney Moor, which about 3 or 400 yards from the river sends off a deep branch in the direction of the ravine on the north, and approaching so near as to leave only a neck of land between them. To the east of this neck, and surrounded by the Jed and the two ravines, is an open space of ground, and upon it the Douglas built a house for himself and huts for his men. The house of the chief occupied the site of the modern cottage between the ridges on the west and the precipice."* Part of the defences are still to be seen, and consist of two ridges running across the point from the ravine on the north to the bank of the Jed on the south. Several imagine that the works belong to the Roman period, but there are no good grounds for such a view. They bear no resemblance to works executed by the Romans. It is known for certain that Douglas built a house for himself and huts for his soldiers here, and there can be as little doubt that he occupied this place, while Arundel was the English warden, to which office he was appointed on November 20, 1316.† It is probable that Lyntalee was the place in the forest where the armies of Scotland had long rendezvoused when danger threatened the Borders, or when intending a hostile expedition into England. While Douglas lay in this retreat, Thomas de Richmond advanced to the Jed with 10,000 men armed with woodmen's axes to hew down the forest, but they were met by the Douglas within one of the narrow defiles of the Jed, who slew with his own hand the English leader and routed his troops.

In the precipitous banks of the Jed at this place are a number of *CAVES* worthy of examination. A difference of opinion exists as to the origin of this class of antiquities, but I am satisfied that they owe their formation to the Caledonian people and to the period of Border warfare. They are to be met with in almost every district of Scotland, and in every part of the world. No doubt they would be used as hiding places during times of Border strife, and even down to our own day part of these caves have been used for farm purposes. About three years ago an accidental discovery was made of a number of caves in the face of the left bank of the Oxnam at

* *Antiquities of Roxburghshire*, vol. ii. pp. 224, 225.

† *Rotuli Scotiæ*, vol. ii. p. 166.

Crailing. One of these had been occupied at a comparatively recent period as a hen-house in connexion with an onstead called Kiddochbraeheads or Crailing *caves*. The row of nests running along the back of one of the caves is still to be seen. When this cave was cleared out by Mr. Paton, the owner of the estate, there were found the skull of a fox, a tobacco pipe, and part of the blade of a knife. It seemed to me that the cave had been partly roofed to protect the poultry, and in front there are the remains of a stone and lime wall, which must have been built in modern times. Although these caves have been so used in recent times, they are of the same kind as those on the banks of the Jed, Aln, Cayle, and Teviot. In 1545 Crailing *caves* was burned by Sir Ralph Evers, Sir John Hetherington, and Sir John Delaville. I regret my limits will not allow me to follow this interesting subject at greater length.*

On the right bank of the Jed, nearly opposite to Lintalee, stands Fernehirst Castle, in early times the stronghold of the Kers, the vassals of the Douglas and the bailies of the abbey. It occupies the site of a baronial fortress, erected in 1410 by Thomas Ker, a person distinguished in Border warfare. According to Earl Surrey it "stode marvelous strong within a grete woode." It was destroyed by Lord Dacre in 1523, the day after Surrey burned Jedburgh. The besieged, commanded by Ker, defended themselves with great skill and courage. In 1549 the English were besieged in it by the Scots and French, and after a stout resistance, taken, and the garrison put to the sword. In 1569 the Earl of Northumberland, Sir Egremont Ratcliffe, and other leaders of the English insurgents found shelter at Fernehirst. Next year it was laid in ruins by the Earl of Sussex. It was rebuilt in 1590.

* Caledonia, vol. i. pp. 96—98. Roxburghshire, vol. i. pp. 202—207.

On the present participle in the Northumbrian Dialect, and on the verbal nouns, or nouns of action, terminating in ing.
By RALPH CARR of Hedgeley.

It is impossible to speak or write with precision about the several sub-divisions of the Anglian speech, which are met with between the county of Suffolk, and the Firth of Forth,

without adopting some better defined terms for portions of this extensive territory than those commonly in use.

By the East Anglian is meant the popular tongue of Suffolk and Norfolk, with perhaps part of Lincolnshire. By the Mid-Anglian or Mercian, that of the midland counties, with the greater part of Lincolnshire, and perhaps South Lancashire. These designations are sufficiently well known. By the North Anglian is commonly meant the popular speech of Yorkshire and the greater part of Durham.

The above are all Danic-Anglian variations of the widespread Anglian tongue.

And closely allied to the last, namely, the dialect of Yorkshire and Durham, is the Norse-Anglian dialect of North Lancashire, Cumberland, and Westmoreland.

The Scandinavian element is here not identical, though cognate. The Cumbrian English, in the mouth of an educated countryman, is to my ears exceedingly manly and agreeable.

The old Northan-Humber-land comprised, as is well known, the whole territory lying northward of the great tideway of the Humber, even to the Firth of Forth. And to prevent confusion, it is very desirable that the Anglo-Saxon name should be restored when we speak of that large Anglo-Saxon territory, and that we should not apply to it the modern English contracted designation of Northumberland, but reserve this for the reduced, though still extensive, tract of the earldom or county of Northumberland, lying between Tyne and Tweed.

In this portion of country the Danes never permanently established themselves. Their language is hardly perceptible in its topographical nomenclature. Names of localities to the north of Tyne are almost always purely Anglian, except where they exhibit traces of the Cymro-Celtic tongue of our British ancestors, of which the present language of Wales is a remnant. This is true however only until we come to the Tweed, for when we have crossed this ever-important boundary, not only do the ancient Cymro-Celtic names become yet more frequently recognizable, but the nomenclature of another Celtic people, the Scots, whose language was Erse or Gaelic, begins to claim attention, though of comparatively recent introduction into that part of our island.

But in the county of Northumberland the Angles seem to have occupied the land, and to have been left in possession of it with but little intermixture with any other people, except

in Tyneside, where there is certainly much Brito-Celtic blood, whilst in Allendale the mixed population is akin to that of Durham and East Cumberland.

On the other hand the dialect of Northumberland extends beyond the Tyne, on the south-east, even to Wearmouth, and ascends the Wear as far as Chester-le-Street, which is on the very boundary of the Durham or Yorkshire, and the Northumbrian dialects. At Ebchester and Shotley Bridge the Northumbrian also prevails, ascending the vale of Derwent.

The old dialect of the county now called Northumberland is preserved in its strongest, broadest, and least altered state in the high moorland vallies of North Tyne, Reed, Coquet, Breamish, and Glen. In the last mentioned dale stood Yevering, an abode of the Anglian princes. The vicinity of Wooler is therefore an important one to those who would inform themselves as to the probable characteristics of the Anglian speech of this region of Bernicia, as brought into it by Ida and his followers. Bamborough and Lindisfarne are no less important centres of research. Hexham again is an instructive locality.

In all of these tracts, with perhaps some reservation as to the last mentioned, the popular speech has much in common with that of the neighbouring shires of Roxburgh and Berwick. The *r* is often strongly and clearly pronounced, as beyond the Tweed. Thence we may infer that the burr is mainly a corruption proper to the rustic dialect of "The How" or hollow of Northumberland, and the adjacent coast line, which did not prevail widely in early times.

But before we proceed to speak further of the Northumbrian dialect, it is necessary to observe that a still further extension of the early Anglian speech must be recognized.

Let me however, ere proceeding further, observe, that I am very far from wishing to cast any doubt upon the fact of numbers of Danish or Norse words having established themselves in Northumberland, together with a multitude of Danish personal and family appellations. We unquestionably have very many such, and many have passed from us into Lothiane, where others again of Norse origin have met them from the north of Caledonia. Yet neither in Northumberland nor in Lothiane is there any Danish or Norse nomenclature of localities indicating the domination and lordship of these north-eastern strangers. The terms from their language seem to have come to us at second hand, together with their personal names, from Yorkshire and Durham, when the Danic-

Anglian inhabitants were driven northwards by dread of the Norman conquerors, whose hand fell with peculiar severity upon the country north of the Humber. To the northward again of the Tweed, and from thence to the Forth and the Avon, near Linlithgow, the speech of the people possesses a distinctive character, and may be termed the North-Bernic or Lothenic-Anglian. It is broader in its vowels, stronger and more archaic in its consonants, and, from having been cultivated as the language of a court and of a national literature, from the period of the establishment of the Scottish throne at Edinburgh, it not only bears the stamp of a courtly and aristocratic idiom, but has been preserved from much of the progressive deterioration incidental to mere popular dialects, such as the rustic Northumbrian.

As to the first known settlement of a Gothic colony in this region, we are greatly indebted for information to the independent research and vigorous judgement of John Hodgson Hinde, in his *General History of the County of Northumberland*, undertaken at the instance of the Society of Antiquaries of Newcastle-upon-Tyne. It is there shown that, according to the narrative of Nennius, not long after the year 450 a Jutish-Anglian colony came over in forty ships, under Oetha and Ebissa, the son and the nephew of Hengist, the Jutish king of Kent, that "having laid waste the Orkneys they passed the country of the Picts, and took possession of a large tract immediately adjoining." And this statement is strongly though indirectly corroborated by Bede, where he speaks of a subsequent league between the invaders and the Picts, against the Britons, which could only have been made by a colony established in the neighbourhood of the Pictish possessions. It is further shown that these were the Saxon invaders against whom were fought several severe battles, recorded by Nennius, on the part of the Britons under Arthur, one on the river Glen, others on the strong frontier afforded by the waters of Dunglass and the Peass-burn.

It cannot, I think, be doubtful, that this colony, north of the Tweed, maintained a footing in the country till the time when subsequent invasions of their countrymen, the Angles, on the coast extending between the Humber and the Tweed, terminated in the election of Ida, as king of all the Northan-Humbrian Angles in 547 or thereabouts.

It is more than probable that the dialects of colonists, of which the earliest came to the Bernician shores, north of Tweed, more than 90 years before the establishment of Ida at

Bamburgh, would differ perceptibly from each other. The strong North-Bernic Anglian was probably heard in the tract afterwards called Lothiane, some time before a cognate idiom disturbed the Celtic speech between the Tweed and Tyne. But if so, the speech of Lothiane had not only a separate, but an earlier origin, than ours on this side of Tweed; and, with reference to the subsequent Scottish kingdom, it had a national origin. As the standard English is fundamentally of Anglo-Saxon origin, so was the standard Scottish fundamentally of Lothenic-Anglian formation. However obscure may be the Jutish element, which it probably included, this may have had its share in determining the distinctive pronunciation, cadence, and idiomatic diction of the language, and is not to be ignored. Subsequently, this form of the widespread speech of the Angles may be called Old-Lothenian, in contra-distinction to the Old-Northumbrian south of the Tweed. In our own times the form of speech which belongs to Lothiane, inclusive of the shires of Roxburgh and Berwick, differs from that of the present county of Northumberland, except where the close neighbourhood and intercourse of the populations has produced an intermediate sub-dialect.

Besides the causes already adduced, another has certainly operated to preserve a strong archaic pronunciation in the large tract constituting old Lothiane; and this is, that the Anglian, as here spoken, was, from early times downward to a comparatively late epoch, acquired as a new tongue, and carefully studied, for the intercourse of life, by numerous persons of Celtic race, either living in the country, or forming large communities in the regions adjoining.

At first these were the native Britons of Bernicia, who were in possession of the land, when the Jutes and Anglians came in and dispossessed them of as much as could be occupied by these strangers. The language of the latter, as that of a more powerful race, more advanced in the arts of war, agriculture, and navigation, would be acquired by many of the Bernicians, and by numbers of their females taken captive in continued raids. The low country of Lothiane, including Berwick and Roxburgh shires, from the natural richness of its soil so favourable to pasturage and to grain, did undoubtedly contain a far larger British population than the cold and stubborn coast-land soil of the region between Tyne and Tweed; which must have been extensively covered by marshy vegetation, or by forests and thickets requiring much labour to clear them away, upon a soil offering little promise to the clearer.

But in Lothiane the Anglian tongue would be spoken by a considerable population, either purely British, or British on the mother's side. Whatever faults they might commit in speaking, they would generally avoid those of the lowest and most ignorant Angles, striving to imitate the speech of the leaders and of men in good position: just as we see the Welsh, the Irish, and the Highlanders of our own times successfully avoiding the vulgarisms of the degraded English and Scotch, among whom their poverty compells them to live.

At a later period, when the Scottish kings established their throne at Edinburgh, the Scoto-Celtic race, speaking Gaelic, became diffused in numerous settlements among the Anglian population of Lothiane. This is testified not only by history, but by Gaelic names of places extensively diffused, and proclaiming themselves to the most unobservant. It is further proved by the physical character of the inhabitants; the frequency of very dark hair and eyes, and the osseous structure visibly exhibiting Scoto-Celtic characteristics, which combined with the Gothic have rendered the frame one of signal strength and power. There prevails in this tract a strongly marked, prominent, and shaggy eyebrow, never seen in any purely Teutonic or Scandinavian country, and indicating a strong influx of that Celtic race from the South of Europe, which came into Caledonia from Ireland, but retains the manifest impress of a primitive Aquitanian and Spanish home.

Now the Scoto-Celtic people would learn Anglian as a foreign tongue. They would speak it as the Anglian chiefs, not as the vulgar, for the Celtic taste in language is ever pure and elevated.

Not long after this period, and side by side with the early English language and literature, arose the language and literature of the Scottish court and nation. As the early English tongue so did the early Scottish gain ground, and eventually supersede the Norman-French, as the vehicle of important records, laws, grants, and charters. Its early poetic literature is nowise inferior to that of the larger kingdom; nor are the chronicles and other prose compositions of Scotland, written in the tongue of Lothiane, less interesting, less eloquent, or less full of promise than those which were produced in the larger and more populous realm of England. The two languages indeed differed not more than did the ancient Greek of Attica from that of Peloponnesus. They were sister tongues, mutually intelligible, yet varying con-

siderably in genius, were cultivated independently and capable of honorable and invigorating rivalry in their progress.

The Lothenian variation of the Anglian tongue differs from the Northumbrian very sensibly. Its vowel-sounds are broader; and some of the consonants also exhibit marked peculiarities. The *gh*, representing the Anglo-Saxon *h*, (for *ch*,) preserves its ancient strong and vigorous utterance as a guttural; as, in *high*, *thigh*, *night*, *fight*; pronounced *heich*, *theich*, *neicht*, *feicht*. This power of *gh* is exactly that of *ch* in German.

Another characteristic of the language north of Tweed is a peculiar palatic sound given to the *l*, which does not seem to be confined to those occasions when it represents the Anglo-Saxon *hl*, but to prevail generally. It may not improbably be a relic of old Cambro-British pronunciation prevalent in Lothiane. In producing this tone the tongue is not applied to the gums of the upper front teeth, but to the middle of the palate. It appears to be a modification of *hl*, the aspirated *l*, but with an aspiration less strong and marked than that heard in the Welsh *ll*.

Lastly, the *r* north of Tweed is pronounced with a very strong vibration, which most probably is referable to the Anglian *hr*, though not confined to words or syllables wherein this was used, but extended to the letter *r* generally.

The Scottish pronunciation of *r* strikes the Northumbrian ear as an archaic, manly, and even stately utterance. We have it also in our own sub-dialect of the high valleys in the Cheviots, and from Wooler northward.

Nothing is more likely than that the popular character of pulpit eloquence in the kirk of Scotland, and the early establishment of parochial schools, may have coöperated powerfully in conserving the old popular pronunciation, at the same time conferring upon it a certain worth and dignity, not possessed by more uncultivated rustic dialects, such as the Northumbrian too soon became.

We may conclude this notice of the Lothenic-Anglian by observing, that the present participle is pronounced in it precisely as on the Northumbrian side of the Tweed, that is to say, archaically. Indeed all the northern Anglian forms of speech seem to agree in this respect; the Danic-Anglian of Yorkshire, and Norse-Anglian of Cumberland, concurring with the Northumbrian and Lothenian.

Having thus adverted to the position of the Northumbrian

dialect among the sister dialects of the parent Anglian, I come to the subjects at the head of this paper.

In trying to write the dialect of our county experimentally, in a more correct manner than is commonly done, in order to exhibit its character, I have been struck by the fact that the present participle of its verbs is nowise represented by our modern English syllable *ing*. In the Northumbrian participle there is not the slightest trace of nasal sound, neither is the vowel-sound that of short *i*. It is an obscure vowel, intermediate between short *a* and short *u*, so that to express making, (*faciens*,) we must write *makan'* or *makand*. That the sign of elision ought to be inserted, if we do not boldly and more correctly restore the original *d*, and write *makand*, is certain. And that we should in truth restore the *d*, the following reasoning will show. In our dialect as in other cognate ones, not only final and unaccented syllables like this, are apt to drop the sound of *d* after *n*, but the same omission holds good in many radical words where the combination *nd* occurs; yet both letters are still very properly retained in writing, for etymological reasons, and to preserve the grammatical forms. Thus the following words are often pronounced in Northumberland as if there were no *d*: *and*, *hand*, *grand*, *land*, *wand*, *stand*, *command*: *garland* also where the last syllable is not under the stress, would always be pronounced *garlan'*; and so again *fend*, *lend*, *mend*, *pretend*, as if *fenn*, *lenn*, *menn*, *pretenn*.

Now, seeing that our dialect can lay claim to this present participle in its old form, just as truly as it could in olden times when the termination was accurately written, we deprive the Northumbrian of one of its best features if we do not represent with the pen, or in type, that which we certainly convey by our pronunciation. I mean, of course, we ought so to write when we wish to give an example of the local dialect. For instance, in such a work as a Glossary, these participles ought to be pretty fully represented.

In the south of England people say "I am comin', goin', lovin', thinkin'." This distinct utterance of the sound of short *i* or close *e*, indicates a wide dialectic variation, though the nasal sound has departed equally as with us, whether the word be a participle or a verbal noun, and the narrow vowel-sound of *i* is the same in both. These southern participles might be written with *e*, as *lovend*.

It was only in the 16th and 17th centuries, or even later, that the practice of writing *makand*, *lovand*, *singand*, *comand*,

runnand, (and so throughout our present participles,) was entirely left off in the north of England and in Scotland, as may be seen in documents out of number.

In our popular poetry, and in all written specimens of the dialect of Northumberland, great interest would be conferred by its restoration.

The sound of *ing* is absolutely never heard in the popular Northumbrian, except in accented syllables such as *bring*, *king*, *ring*: *making* is instinctively pronounced *makan'* or *makun'*.

The cause of the loss of the English participial termination in *and*, clearly lay in the previous loss of the participial or adjectival inflections which served to define the present participle as such. When these inflections fell into disuse, and the other distinct inflections of the verbal nouns in *ing* also had been lost, the two parts of speech became confounded in the ideas of unlearned writers, and the participle gradually slid into the form of the verbal noun,—very much to the wrong and detriment of our language.

Let us now turn our attention to the verbal noun, for here again the Northumbrian exhibits an interesting remnant of Anglian usage.

In the Anglian, as in the Anglo-Saxon, or West Saxon, the more primitive verbs formed nouns of action in *ing*, but a large number of verbs of a derivative character formed them in *ung*; and verbal nouns, or nouns of action in *ung*, were on the whole the more frequent.

Now the Northumbrian dialect has evidently taken the latter, unconsciously, as its model, as the standard English has taken the former. For all our verbal nouns of this kind are pronounced with an obscure sound nearer to that of short *u* than to short *i*.

What then ought to be the spelling in order to give effect to this peculiarity of the dialect?

The vowel *y* originally had this very intermediate character between *u* and *i*, and those who are familiar with the old northern English, and old Scottish literature and muniments, will remember how much addicted our ancestors were to writing this termination as *ynq*. It appears to me that if we recur to their usage, and merely add a grave accent over the *y* to indicate its somewhat exceptional sound, akin to short *u*, we shall do wisely. We should then write:—the makÿng of the hay; the sendÿng the boy; the fellÿng the tree; the ploughÿng of the fallow; the servÿng; the shearÿng; the harvestÿng.

Whenever we might use the articles *a* or *the*, or an adjective, before such words, they are of course nouns, not participles; and ought to be written *ying*.

Whenever, on the other hand, the verb *to be* precedes, as in "I am coming," "he was seeking," "they will be dying," or whenever the word takes the place of an adjective, as in "the coming year," "the dying bird," of course it is a participle, and in Northumbrian may properly be written *com-and*, *dyand*, *seekand*, &c.

In some instances different views may be taken as to whether an English word with the termination *ing* be used as a noun or as a participle; but this is not the place to enter into such nice considerations, and sometimes either view may be admissible.

The Battle of Flodden Field. By the REV. R. JONES,
Vicar of Branxton.

WHEN recording an event which has taken place more than three hundred years ago, it is necessary that particular attention be paid to every historical fact, to every document, and every circumstance bearing on that event. Our information, as far as we are able to judge, must be gained from authentic sources, and before we can substantiate any occurrence of importance, as a fact to be relied on, we must give our proofs from history, or assign sufficient grounds why we conclude that such and such things would have been done, and why they were done.

In my description of this great and important Border battle, which shook the kingdom of Scotland from one end to the other, and filled it with the deepest grief, I shall give a succinct account of the state of feeling which predominated in the two countries north and south of the Tweed; describe the assembling of the two armies, their dress and defensive weapons; and notice any other event or circumstance which more particularly points out the identical Field on which the battle was so obstinately and so heroically fought.

A short time previous to this battle the two nations had petty grievances to complain of, which, although of minor importance, nevertheless stimulated each other to acts of reprisal, especially as neither would make concessions to the

other. The Bartons in Scotland and the Howards in England had met and fought on sea; and the Borderers—those fierce, wild, and restless men, residing on the banks of the Tweed, belonging to both nations—had met in deadly combat time after time, sometimes few in number, headed by a daring and chosen chief, and at other times, but in more remote ages, under the command of the head of a clan, as a Douglas, a Home, or a Percy, when the strife for superiority, plunder, and victory terminated in torrents of blood.

This hatred of each other had been smouldering in the hearts of the men of England and Scotland for generations past, and it only required the aspiring touch of ambition to kindle it into a flame. From the days of the invasion under Edward I. the men of Scotland had justly and deliberately brooded over the wrongs inflicted upon them by that rapacious king. A Wallace and a Bruce had shewn what their countrymen could perform in daring feats of combat, and on the bloody field of Bannockburn—a battle which makes the hearts of all true Scotchmen, even at this day, burn with heroic valour—they had prostrated their powerful foe and tarnished England's glory.

From this time to the battle of Flodden, a deadly hatred of each other's power had manifested itself at various times, and in various ways. Scotland and France held together for their own mutual benefit, and the intercourse between these two nations was of the most friendly and durable nature, even continuing down to the unhappy days of the unfortunate, but ever to be lamented, Mary queen of Scotland.

The Border marches on both sides of the Tweed were occupied by men who delighted in plunder and slaughter. No sooner had the sun gone down and the shades of night appeared, than these bold, fearless men were across the fords, pillaging and killing, robbing and destroying, and their most daring feats of personal valour resounded in exulting joy at their wassail feasts, and in their homes, night after night, for the amusement and excitement of those who came to praise, to laugh, and to hear.

Such was the feeling and state of the countries of England and Scotland when King James IV. ascended the throne—a throne that was spotted at the very commencement of his reign, with the blood of intestine war, which always haunted that monarch from the beginning of his sovereign authority to his untimely death on the fatal field of Flodden. He had married Margaret, the eldest sister of Henry VIII., from

which alliance we might conclude that there would be peace between the two kingdoms; but from the first day of his ascending the Scottish throne, his affection and interest, counsel and influence turned to the old ally of his kingdom—the king of France. Henry, who had proclaimed war, and made every preparation for carrying it into effect, was on the eve of invading the French territory, his forces were collected together, and his ships were ready for their embarkation. He had however, previous to his departure from England, appointed Thomas Earl of Surrey, Lieutenant-General of the northern counties, advising him to use all diligence and caution, and to neglect nothing that would tend to the welfare and security of his kingdom, for he had well grounded suspicions, that the king of Scotland was secretly preparing an army, either to assist the king of France, or to make inroads into his kingdom with a view of invading it during his absence.

In the meantime James had done all he possibly could to persuade Henry to remain in England; but unfortunately all his entreaties were in vain. Whereupon he instantly proclaimed war against England, well knowing that by so doing he should weaken the strength of Henry's army, by compelling him to send sufficient force to protect the northern parts of his kingdom. His plans were no sooner devised than they were put in execution. Scotland sounded with the clang of the hammer from north to south, and from east to west: men were resolute and determined—full of heroic ardour for their king and country and for their own personal glory. Once more were their swords, spears, axes, and arrows sharpened and burnished for the deadly combat, after having lain for nearly a generation bygone, in the dust and cobweb of their own mountain and lowland homes. The herald of war sent by their beloved king had passed throughout the length and breadth of the land, summoning the men capable of bearing arms to meet him in the course of three weeks. This summons was obeyed by every man with alacrity, cheerfulness, and delight. Bannockburn with all its glory, and with all its results, was the watchword which passed from town to town, from mountain to mountain, and rested nightly on the compressed lips of all, who had girded on the sword for the battle strife. One hundred thousand men met together in this short space of time, fully equipped and accoutred, on the Borough Moor, near Edinburgh, with provisions for forty days, ready at the word of their king to march and to

follow him to whatever part he wished to lead them. In this number, however, we must include the attendants and camp-followers, the usual train concomitants of an army, and not consider them all as fighting men.

The news of these warlike preparations stirred up the Border blood to feverish heat; men felt themselves carried away by restlessness and excitement, every one was ready for revenge, and panted for conquest and for glory. Under these overpowering feelings a band of Northumbrians, commanded by one of their chiefs, crossed the Tweed and entered Scotland, and as a prelude to the war, commenced hostilities by burning and pillaging, and carrying off considerable spoil. This daring act of depredation so aggravated the Warder of the Marches, Alexander Lord Home, who had this part of the country under his more immediate protection and guardianship, that he hastily got together 3000 horsemen, crossed the Tweed, laid the northern parts of Northumberland under contribution, burned several of the villages and amassed much plunder, which many of this marauding party carried off in safety to their own country. But as Lord Home and the rest of his men were returning in a careless manner loaded with spoil, through the woody country between Wooler and Milfield, they were suddenly surrounded by a large force of horse-archers and bowmen, under the command of Sir William Bulmer, who had concealed themselves amongst the trees and tall broom, through which the path lay that Home and his straggling horsemen were drowsily trotting their jaded steeds over.

This conflict was short, sharp, and deadly, but decisive. Four hundred were killed, many of them before they saw their enemy, or heard the twang of the bow that sent the messenger of death amongst them. More than two hundred were taken prisoners, amongst whom was George, the brother of Lord Home, who had accompanied him in this Border-raid. He however and the rest of his men fled with precipitation to the banks of the river, crossed the Leet ford, after leaving all their booty, and a considerable number of horses in the hands of the victors. In these superstitious times, even trifling events were construed into acts of importance, and this failure on the part of the Scots, at the commencement of the war, was considered by many as an omen of ill luck. This skirmish took place about a month before the battle of Flodden, and was generally known by the name of "The ill rode."

Be this as it may, there was no lack of resolution and manly

prowess throughout Scotland. The flame of war had heroically kindled even in the bosom of the gentler sex; their fingers, like the Carthaginian ladies in the days of Hannibal, were occupied day and night in warlike preparations, and in embroidering pennons and flags, which their husbands, sons, and brothers swore to defend with their lives when in battle; and verily most truly and manfully did they fulfil their vows on the fatal field of Flodden. All was animation and excitement—from the Palace of Holyrood to the castle there was the constant tramp of warriors cased in armour. The wild music of their own mountain glens and highland homes, sounded in the dead of night, and the rattling of the horses' hoofs, together with the shrill ring of the trumpet, kept all in the highest state of inquisitiveness and curiosity. The messengers and heralds were passing to and fro, the streets were full of men and women, and whenever the king made his appearance amongst them, the enthusiastic clash of arms, and the shout of defiance spread from throng to throng, till the echo from the rocky crags reverberated the prolonged martial sound.

Such was Scotland and her romantic city, in the early part of August 1513. The king and the chief nobles of his kingdom held diverse consultations respecting the proclamation of war with England. Many were against invading that kingdom, and the queen used all her influence and entreaties to persuade him not to break peace with her brother. The arts of necromancy were called in to aid their cause, with the hope of diverting him from such a rash and hazardous enterprise. The superstition of the age was fraught with unnatural sights and wonders; the private chapel of Linlithgow was made the scene of ghostly apparitions, during the very time the king was on his knees at prayer: and unearthly ominous voices proclaimed in the dead of night, from the ancient cross of Edinburgh, the names of many of the great men of Scotland who should fall on the day of battle.

Neither persuasion nor supernatural events had the least influence over the mind of James; he was fully bent on his warlike intentions, and no power on earth could divert him from them. His army stood now before him; men from all parts of his kingdom had obeyed his summons, and were ready to do his bidding. Never before or since had such an host of warriors assembled together in Scotland, and never were men more anxious to march across the borders of the Tweed. The only certain way of standing high in the king's

favour was to embrace his views, to second his projects, and to give a willing and helping hand in furthering his designs of invading England.

This passion for war was excited to the highest pitch by the fostering flattery of many of his nobles. Andrew Foreman, Bishop of Moray, a man of mercenary character, who had been bought over by the gold of the king of France, urged him with all his influence and persuasion to put in execution those ardent desires for war which had engrossed his constant thoughts for several months past. He represented by letter the cowardly act of delay, the base and dastard conduct of withholding from the strife, especially when his old ally was threatened with the danger of invasion from so powerful a foe as Henry king of England. He painted in glowing colours the sure prospect of honour, glory, and victory which was certain to crown his exertions the moment he crossed the Borders. Nothing was left undone or omitted that would stimulate him to begin and carry on the war; even the queen of France had dubbed him her own true knight, and to this effect had sent him a ring from her own finger of very great value, begging him by letter not to hesitate in his noble and manly purpose, "but to march, if it were only for her sake, three feet on English ground."

Everything being now in readiness, the camp on the Borough Moor was broken up, and orders were given that the army should march south for the banks of the Tweed. The drums and the trumpets sounded on every side and in every direction, and all was bustle and excitement. The whole inhabitants of Edinburgh and the neighbourhood for miles around had assembled together, to witness the sight of a hundred thousand men marching to invade England. The Borough Moor was crowded with soldiers and horses, oxen and baggage-waggons, tents, pennons and flags. The commanders of the different divisions, and men at arms, were clad in mail from head to foot, highly polished, and mounted on chargers of great power and mettle. The Borderers rode horses of less strength and elegance, but of great speed and activity, and their armour was generally of a lighter description, more adapted for men accustomed to sudden forage, or for pursuing a routed enemy. The foot soldiers were clad after the custom and manner of that part of Scotland from which they came. Those from the towns wore the steel cap and gorget, with a light coat of mail fitting closely to the body, but in no way impeding either the arms or the legs.

The men from the Lowlands wore the iron cap fastened under the chin with scale iron clasps, and their coats or jerkins were made of leather, or strong linen quilted with light scales of iron, overlapping each other, but perfectly flexible and strong, and proof against the arrow point. The Highland men retained the tartan and plaid, together with the blue bonnet and eagle's feather, much the same as those of the present Highland regiments, but of a coarser quality. Most of the foot soldiers carried on their left arm the round shield or target made of sheet iron, plated tin, or wood covered with leather. Their weapons were the long spear, fifteen feet in length, fashioned after those used by the Grecian phalanx, and by the English at the battle of Crecy; their swords were both long and short, either curved or straight, depending whether they were worn by horse or foot soldiers; the former had also the short battle-axe, with edge and spear point, a most formidable weapon in close combat, made either to cut through the helmet or coat of mail, or to penetrate the head or body; and many carried the long Moorish pike, the bow and sheaf of arrows.

Thus accoutred and equipped, the army set forward on its march for England; all were animated with hope, and acclamations and prayers for its success met it on every side, and in every town and village through which it passed. The heavy artillery, consisting of seventeen great guns, but according to some historians, twenty-four, was drawn by oxen, and generally went in advance of the army, and the horse and foot followed in large divisions. In this manner the army passed through the country from Edinburgh to the banks of the Tweed.

On Sunday, the 21st August, 1513, the town of Coldstream was full of soldiers. The Lee's haugh and the country round were covered with men and tents. Never before or since had such an armed host of Scotchmen met on the banks of the Tweed, and thousands on that night slept for the last time on Scottish ground. The sun had no sooner risen on Monday morning, the memorable 22nd August, than this vast assemblage of 100,000 men were all astir. The king, in all the panoply of martial glory, passed from rank to rank; while his nobles, dressed in mail armour, headed their respective divisions, and the enthusiastic shouts of the men of all ranks were heard far and wide on the English side of the Tweed. The ford at the mouth of the Leet, and the one in those days on the haugh, a little to the west of the Dedda and nearly opposite the

mill at Cornhill, were crowded with men and horses, oxen and baggage-waggon, crossing to the other side. The Borderers, under Lord Home, led the way, for they were considered as the vanguard of the army, being perfectly well acquainted with every inch of ground on both sides of the river, and no doubt but he and his men thirsted for revenge on account of their recent defeat on the plains of Milfield. He would eye with especial favour and martial joy, the different companies forming in rank and marching order, the moment they set their foot on English soil.

They were now in their enemy's country, and every face they met was that of a foe. The castles of Wark and Norham were immediately besieged, and soon fell into their hands. The latter was in those days garrisoned by men in the pay of Thomas Ruthal, Bishop of Durham, who in his account of the Battle of Flodden, written only eleven days after the event, thus bemoans his loss to Cardinal Wolsey, then with King Henry before the walls of Terouenne:—"After right herty recommendations to reherse unto you the greate sorow and pensiveness that I have had and taken for the mysfortune of my Castell at Norham, whiche by the cruell tyranny of the king of Scots was lately taken, and a greate part thereof rased and cast down." He then goes on to say, but in a very strange and silly manner, coupling St. Cuthbert with the Almighty:—"But I thanke o^r Lorde God and my patrone Seint Cutbert, who neù suffered anny iniurye dispute or displeasure doon to his churche to passe onpunysshed, that greate tyranows and cruell dede is well requyted and revenged. For on the IX. day of this instant monethe of Sepr., after a muclouse greate conflicte and terrible bataill, the king of Scots w^t the greatest parte of the lords and nobles of his reame wer in playne bataill vanquyshed, outhrown and slayn." The castle of Norham was taken possession of on Monday the 29th, one week after crossing the fords near Coldstream. Considerable plunder was found within the walls, all of which was carried away by the Scotch.

Etal was next attacked and soon fell into their hands; but before Ford, which was then occupied by Lady Heron, there was more difficulty to contend with. Stipulations had been made by that lady, under peculiar arrangements, that her castle should not be thrown down. These were agreed to by James under certain conditions, but whether fulfilled, or not, on Lady Heron's part, history is scant on the subject; for it is very well known that the assault took place, and consider-

able damage was done to the castle. This lady has been accused of playing a deceitful part towards the king, for at the time, she in all appearance seemed friendly to his cause, she was carrying on a secret correspondence with the Earl of Surrey, and giving him a full account of the Scotch army, the castles they had assaulted and taken, the number and condition of the men, and the position of their camp on Flodden Hill.

England in the mean time had not been dormant; she had her emissaries and her spies in all parts, especially along the Borders. From Berwick to Carlisle the Border pricklers on their fleet and wiry steeds were to be heard of, and many passed over stealthily on foot to hear and to see what Scotland was doing. Even the movements in the Palace of Holyrood, and on the Borough Moor were not concealed from her; and, although the mode of travelling in those days was not so quick as with us, yet did intelligence of the army crossing the Tweed reach the Earl of Surrey in a very short time, notwithstanding he was then more than two hundred miles from Coldstream. News from the North of England was greedily sought after by men in the South, and the rumours of war were the engrossing topics from the peasant to the prince.

In the latter end of July, Surrey marched through the streets of London, with a few hundreds of his retainers, on his way to Yorkshire. The Castle of Pontefract was made the rendezvous where many of the warriors were to meet. Here plans were formed and orders given for summoning the horse and foot soldiers to make all possible speed to meet him in Newcastle. In this town he was joined by lord Dacre, who commanded the horse, Sir William Bulmer, Sir Marmaduke Constable, and many others belonging to the northern counties. Cheshire, Lancashire, Westmoreland, and Cumberland sent their thousands from the West; and Yorkshire, Durham, and Northumberland from the East. At this critical time Lord Thomas Howard, High Admiral of England, landed at the mouth of the Tyne with 5000 soldiers sent from the army in France by the king to assist in protecting his kingdom. Before Surrey left Durham, the celebrated banner dedicated to St. Cuthbert, was delivered to him by Bishop Ruthel, whose childish superstition of its marvellous power is ridiculously mentioned in the letter from which I have already quoted. England was agitated throughout her northern counties: the war feeling had kindled in the breast of her warriors, and they had buckled on their armour, and put

themselves in readiness for the battle fray. The queen herself had become infected with the chivalrous contagion; she and her ladies, like those in Scotland, were closely employed in making flags and colours, and in one of her letters to Cardinal Wolsey she expressed herself thus, "I am horribly busy in making standards, banners, and badges."

Men from the East, West, and South of England came pouring on in quick succession. Durham and Newcastle were thronged with horse and foot soldiers. Day and night brought fresh supplies; no sooner had thousands marched on for the North, than thousands took up their places from the South. The watchword, that the king of Scotland had invaded England, and was throwing down castle after castle, spread with astonishing rapidity from town to town, and every tongue resounded with the depredations committed by the Scottish army. Surrey had ordered all the men capable of bearing arms to hurry on for Alnwick, a town whose inhabitants knew well the strife of Border war, even from the days of Malcolm III. king of Scotland, whose blood was treacherously spilt before her gates, to the hour when Surrey's forces assembled within her walls on their march for Flodden Field.

By the 5th September their tents were pitched at Bolton, a small hamlet, about five miles west of Alnwick, and north of the river Aln. Here they were joined by the Borderers, and the men of Northumberland under their different commanders, all animated with the greatest zeal of doing battle with their foes. They were clad much in the same manner as the Scotch. The leaders and the men at arms rode strong powerful horses, and they were covered from head to foot in burnished mail armour. The warriors in those days never considered themselves equipped for battle unless they were cased in steel or iron. The struggle for victory was generally hand to hand, especially after they had discharged their arrows, so that the shock of battle was more terrible when each man singled out his foe, and was determined to conquer or to die, than it even now is, under all the improvement of the destructive implements of war. A few hours combat sufficed to cover the field with the dead and dying. The arrow and spear points soon did their fatal work, and the bill, the battle-axe, and the sword, wielded in the hands of the combatants, quickly laid their thousands in the dust.

The two armies were now drawing nearer and nearer to each other, the day of battle was close at hand, a few hours wafted intelligence from camp to camp, and all were preparing

for the encounter. Surrey had challenged the king to meet him on Friday the 9th September, and James had accepted the challenge, telling him, that had he been in Edinburgh, he would gladly have hastened to obey the summons. At this time the king was strongly encamped on the eastern end of Flodden Hill, a position that commanded a view of the country to the north and east, and looked directly across that part of Northumberland over which he expected the English army to march. The Till, a deep, slow, sluggish river, lay on the north side, and extended with its tributaries from the neighbourhood of Wooler to the Tweed by Twizel bridge; consequently, he neither expected nor dreaded an army from that quarter.

Surrey, on the afternoon of Tuesday the 6th, removed his army from the field at Bolton to Wooler haugh, where he encamped till the morning of the 8th. After having tried different plans to induce James to meet him on Milfield Plain, but without success, he gave orders for his men to break up their encampment and to march in the direction of Doddington, through which village the English army passed on their way to Barmoor Wood, where they encamped for the night.

This sudden movement of Surrey caused James to turn his watchful eye towards Scotland. All was surmise and conjecture throughout the camp on Flodden Hill, and no one could assign a satisfactory reason why he marched on the north side of the Till in a direct line for the banks of the Tweed. But no sooner had the fatal day arrived, when the two armies, in accordance with the challenge given and accepted, were to meet, than Surrey's host was on the move and the mystery was revealed. Orders were given that the artillery and heavy baggage were to pass over the bridge at Twizel, and the van-guard under Lord Thomas Howard was to march in the same direction. The passing of the English army over the bridge at Twizel, is thus graphically drawn by Scott in his poem of *Marmion* :—

From Flodden ridge
The Scots beheld the English host
Leave Barmoor Wood, their evening post,
And heedful watched them as they crossed
The Till by Twizel Bridge.
High sight it is, and haughty while
They dive into the deep defile,
Beneath the cavern cliff they fall—
Beneath the castle's airy wall,

By rock, by oak, by hawthorn tree,
Troop after troop are disappearing
Troop after troop their banners rearing
 Upon the eastern bank you see,
Still pouring down the rocky den
 Where flows the sullen Till.
And rising from the dim-wood glen
Standards on standards, men on men
 In slow succession still.
And sweeping o'er the gothic arch,
And pressing on in countless march,
 To gain the opposing hill.

From Barmoor Wood to Twizel Bridge, and to the banks of the Till by Crookham, all was commotion and bustle, for the different divisions were marching to the various points assigned them by their commanders. The fords across that river, from the castle at Ford to its confluence with the Tweed, were well known to many in the English army. The bastard Heron, who was born and brought up in the country, a daring Border trooper, who did good service in the battle field, and who had very recently joined Surrey, together with Sir William Bulmer and others perfectly acquainted with all the natural difficulties of the river, were present to give counsel on that eventful day; and before noon, thousands were across the Till, forming in the different companies they were to march to Flodden.

We may well suppose that so many soldiers hastening for the battle field would be the engrossing news of the day. Surrey's movements would reach Berwick and Coldstream long before Lord Thomas Howard had passed all his men, artillery, and heavy baggage over Twizel Bridge. The encampment at Flodden would be closely watched by all the Borderers, and every eminence in the neighbourhood of Coldstream would be covered with spectators. Many a gallant Scotchman would cross the Tweed at the mouth of the Leet, either with a determination of mingling in the fight, or with the intention of plundering their enemy should he be worsted in the battle. The field above the monument leading to the bridge, called the "Gallows Knowe," would be crowded with men and women. The whole town of Coldstream would be there viewing the Scotch army taking up its position on the ridge of Branxton, and at that distance, many would be able to see the king's flag fluttering in the breeze.

At the time the English army encamped at Barmoor Wood, there were two celebrated fords across the Till lying between the castles of Ford and Etall; one called the Willow ford,

a little to the north of the village of Crookham, in the direction of Etall; the other to the east of Crookham called Sandy ford. The Heaton ford is not so much as mentioned by any ancient writer of this battle; nor, can I understand, how at this day it should be pointed out, as the ford over which part of the English forces passed when marching for the battle field. It is surrounded on the north side with precipitous banks, not at all calculated for a multitude of men and horses clothed in armour to cross over; indeed, I am fully persuaded that this was not the ford over which the Earl of Surrey and the rear-guard passed on their march to Flodden. From Watchlaw, an eminence east of Etall, and from Barmoor Wood, where they encamped for the night, almost a direct line may be drawn, leading to a haugh or tongue of land bounding the Till below Crookham. The two fords alluded to are placed here, and one retains to this day the very name mentioned by Hall, who wrote an account of the battle in 1548, or 35 years after it had taken place, as "the little brook called Sandyford" over which the English passed; and the old ballad, which is supposed to have been written not later than Queen Elizabeth's time, also mentions this ford:—

And never flee while life did last,
But rather die by dint of sword;
Thus over plains and hills they passed
Until they came to Sandyford.

With these strong evidences before me, I do not hesitate in affirming, that this is the very ford through which Surrey and the rear-guard plashed, although mentioned in such a trifling manner as "A brook of breadth a tailor's yard." The small stream of Pallinsburn empties itself into the Till at this place, and is known by the same name, which certainly might be stepped over, being not more than three or four feet in breadth.

Before the army commenced its march from Barmoor Wood, no doubt the village of Branxton would be mentioned as the place of rendezvous, at which both the van-guard and the rear-guard should meet. At the time of the battle, and for more than two centuries after, a low piece of ground lying to the north of the parish of Branxton, through which the small stream of Pallinsburn runs, was covered with water to the extent of more than a mile and a half in length, and in many parts more than two hundred and fifty yards across.

In the centre of this bog or moat of water, and opposite the road leading to Mardon, there was an ancient bridge, called by the old people, "Branx Brig." This bridge, according to the tradition of the oldest inhabitants, whose ancestors for generations had resided in Branxton and the neighbourhood, was always pointed out as the bridge over which the English passed on their way to battle. The foundations of this bridge were to be seen thirty or forty years ago; and indeed some of the stones still remain, but in making proper levels through the bog, the greater part has been moved away.

The rear-guard, after having passed Sandyford, would march westward for the village of Branxton; one part might pass to the south of Pallinsburn bog, and the other through the centre over "Branx Brig," both close in sight of each other, and take up their position south and east of the village. The van-guard, under Lord Thomas Howard, would march, after passing over Twizel Bridge, on the beaten road by way of Cornhill, then turn for the Barelees toll on the road that formerly led to Branxton, and take up its position to the west of the church and village, both of which in those days were considerably larger than at present.

These two columns, although a few miles apart, would be in constant communication with each other. The Borderers on their fleet steeds would be galloping to and from each division; orders would be given, received, and cheerfully obeyed by men who were expecting almost every moment to be engaged in deadly combat with their enemy. All eyes would be turned towards the Scotch army posted in battle array on the hill before them, and every man would hasten to take up his place assigned him on the battle field by his commander.

The van-guard under Lord Thomas Howard, assisted by his brother Sir Edmond Howard and Sir Marmaduke Constable, formed in position to the south-west of the church, in the fields leading to Moneylaws; behind these three divisions were placed the baggage-waggons, as a protection to their rear, and amongst these soldiers was the standard bearer, Sir John Forster, belonging to the bishopric of Durham, who carried aloof the banner of St. Cuthbert. The Earl of Surrey, who commanded the rear-guard, was placed near the vicarage house, assisted by Sir Philip Tylney, Henry Lord Scrope of Bolton, and others of the nobility of the northern counties, and on his right and left by Lord Dacre with 2000 horse drawn up in his rear; immediately in and

around the village, extending a little to the west of the church, and near the centre of the whole English line, in readiness to give assistance wherever he and his men might be required. With Dacre was the bastard Heron, who commanded a large troop of horse, than whom none was more formidable on the field, and none more willing for the battle encounter. On his left eastward, he was ably supported by a numerous division of horse and foot soldiers under the able command of Sir Edward Stanley, assisted by Sir William Molyneux and Sir Henry Kirkley from the county of Cheshire, placed on the fields south-east of the village leading to Mardon.

The English forces now drawn up in six divisions extending from the east to the west of the village, would cover considerably more than a mile and a half in length; but from the narrow position of the ground, nearly all in a line. The westward division under Lord Thomas Howard would be hid from the rest of the English forces on account of an elevation of ground a few hundred yards from the church, supposed to be "the Piper's Hill" alluded to in history, around which the most deadly conflict took place, and where it is supposed the king fell.

Opposite this formidable force stood the Scottish army on the ridge of Branxton Hill, waiting anxiously the order for commencing the dreadful onslaught. To the extreme left, on the sloping part of the hill, looking towards Wark Castle, Home Castle, and Coldstream, were drawn up the wild and undisciplined Highlanders, and stout Borderers under Huntley and Lord Home; to the right of these forces looking north, those troops under Crawford and Montrose; a little further east the chivalric king with many of his nobles both in church and state, who comprised the best and bravest blood of Scotland; on his right, on the gentle slope of the eastern end of Branxton ridge, was the right wing under Lennox and Argyle, and the reserve under Bothwell a little to the south-east of the king's troops.

In this position stood the contending armies opposite each other, before the battle began. One elevated considerably above his opponent and commanding one of the most splendid views in the country, looking over the greater part of Berwickshire and Roxburghshire, and even extending beyond the hilly county of Selkirkshire—

"Where not a mountain rears its head unsung."

With this beautiful landscape before them to the far west and

north-west, and the English army below them steadily forming in position and preparing for the battle that was on the eve of commencement, thousands of the bravest men of Scotland, together with their beloved king, viewed for the last time the country that gave them birth, and which was shortly to weep and mourn over the death of so many of her great and heroic sons.

Dr. Leyden, in a note to his ode on Flodden Field, mentions that on the evening previous to the battle, the Earl of Caithness, a young nobleman who had incurred King James' displeasure for revenging an ancient feud, came to the encampment on Flodden Hill with three hundred young warriors all dressed in green, and submitted to the king's mercy. James was so pleased with this mark of submission and loyal attachment, that he granted to him and his followers an immunity for past offences. The parchment on which this immunity was inscribed is said to be still preserved in the archives of the Earls of Caithness, and is marked with the drum strings, having been cut from the head of a drum, no other parchment being at hand. The Earl and his gallant followers perished to a man the next day on the fatal field of Flodden, ever since which time it has been considered unlucky in Caithness to wear green, or to cross the Ord on a Monday, the day of the week on which he set out to join the king.

The positions of the English forces were drawn up to face the different divisions of the Scotch army, where they had been for several hours patiently waiting the approach of Surrey; for no sooner was it made known to James that the English were crossing the Till, than he moved from his encampment on Flodden Hill and took possession of the ridge of Branxton Hill, which gave him a full view of the country for several miles over which the van-guard was marching. He is blamed by several historians for abandoning his camp, where he was so strongly fortified; but any one who has examined the position of the ground, and taken into consideration the movements of Surrey, who was then marching between him and Scotland, and by this masterly manœuvre exposing the rear of his camp, and cutting him off from his own country, must admit that the king displayed no mean talent in generalship, when he selected such an advantageous and commanding position as that of Branxton Hill.

The armies being now put in battle array confronting each

other, stood thus upon the field: Lord Thomas Howard with the van-guard was opposite Huntley and Home, Crawford and Montrose; the Earl of Surrey had chosen the ground opposite the king, where the royal flag was flying, and which positions were the centres of each army; Sir Edward Stanley who commanded the left wing of the rear-guard, was opposite Lennox and Argyle. The cannons were placed in front, along the two lines, at proper intervals between each division, and from the cannon balls picked up at various times on the field, we may almost conclude from the position in which they generally are found, that the greater number of shot fired by the Scotch were leaden balls, and by the English iron.

It was now drawing near to 4 o'clock, and the sun was descending in the western sky; the clouds of night were about to cover the earth, yet was there time enough for thousands of the brave men, who were now standing gazing at each other, in the full vigour of manhood and health to be laid in the dust; when, lo! men were seen galloping along the brow of the hill, and on the plain below from rank to rank, and the trumpets sounded for the charge. All were in readiness and eager for the battle, the voices of the different commanders were distinctly heard, the clash of armour grated for a moment harshly on the ear, when in the next all was deadened by the roar of the guns, and the shouts of men engaged in the deadly strife.

“ Then ordinance great anon out brast
On either side with thundering thumps,
And roaring guns with fire fast
Then levelled out great leaden lumps.” OLD BALLAD.

The thunder of the cannon soon ceased on both sides, without doing any serious injury to either; a few shots from each party sufficed, neither of which could be considered very proficient in the art of gunnery. The ground was uneven, and from the elevation of the guns the shot fell either short of the object aimed at, or passed considerably over the heads of the men, for many balls have been found north and south of the field of battle, and also along the side of the hill where the Scotch were stationed. Such fighting was too slow and desultory in its effects, either to satisfy the one or the other; both sought closer quarters, and the struggle throughout was maintained from hand to hand.

It is admitted by all who have written an account of the

battle, that the van-guard under Lord Thomas Howard was first engaged. His brother Sir Edmond Howard being in the extreme west of that division, was suddenly confronted by the Borderers under Lord Home, and the Highlanders under Gordon Earl of Huntley. They had descended from the hill with a shout and slogan cry to meet the men under Bryen Tunstall, who were ascending the lower acclivity, and they were immediately engaged in close combat with their enemy. Nothing could withstand the bold impetuosity of this attack. The English were driven from their ground several times, but cheered on by their commanders, returned again and again to the charge. The ground in a very short time was literally strewn with the dead and dying. Men fought with stubbornness and resolution, the Highlanders with their swords and axes, and the Borderers with their long spears. Three times was Sir Edmond Howard felled to the ground, Tunstall lay dead among the slain, the men began to waver, and at last they fled, leaving Home and Huntley masters of this part of the field after long and continued fighting. Just at this critical and important period Lord Dacre and the bastard Heron, who was slightly wounded, came to the rescue, with a large body of horse, which had already been engaged in other parts of the field, and effectually stopped the victorious career of the left wing of the Scottish army. The sword and the spear came again in close contact, and men fell fast under the point and thrust of both. Several of Lord Home's friends were killed at this charge; but he managed to maintain his ground, and kept possession of it throughout the day and night, guarding the numerous prisoners taken on the field, amongst whom was Sir Philip Dacre, brother of the commander of the horse.

No sooner had Lord Home and Huntley commenced the battle, than the troops under Crawford and Montrose moved down the slope of the hill. The admiral now saw the critical position in which he stood, and knowing full well the advantage the Scotch had in seeing the length and breadth of the field, sent hastily to his father, the Earl of Surrey, imploring him to engage the troops before him. The rising ground spoken of as "Piper's Hill" lay between the van and the rear-guard, so that nothing, as I have previously mentioned, that was going on with the one division, could possibly be seen by the other. Whereupon Lord Thomas Howard, to show his anxiety for the fate of the day, took from his breast his "*Agnus Dei*," and sent it with a messenger to his father,

as a pledge of his earnest entreaties to begin with the centre, or to come to his assistance. In the meantime the king observing the conflict on his left, and that the troops under Crawford and Montrose, as well as those under Huntley and Home were hotly engaged, gave orders that his body-guard and all around him should march down the side of the hill and mingle in the fight. The reserve under Bothwell followed close in the rear of the king, and at this moment thousands throughout both armies steadily moved in the direction of "Piper's Hill," where the battle continued with dreadful carnage the whole of that fearful and bloody day.

Sir Edward Stanley in the eastern division had been fiercely engaged with the right wing of the Scotch under Lennox and Argyle, but the conflict here was not of long duration, although tracked with streams of blood. The English archers, composed principally of men from Cheshire and Lancashire, did terrible execution on the close ranks of the Highlanders and Islesmen; they fell thick on all sides, and the repeated showers of the unerring long-shaft arrows, broke their solid masses and put them in confusion. Lennox and Argyle, together with many experienced French officers in this division, did all they could by entreaties and menaces to cause the troops to stand firm in their ranks on the ground they then occupied, but without effect, for they instantly rushed down the hill, and engaged their foes (who were rapidly ascending to meet them) in close combat. The English bill-men, at the first onset, staggered under the charge and were obliged to give way. The onslaught was so fierce that it bore down all opposition, but this short success on the part of the clansmen at last gave way, and the undisciplined Highlanders were assailed in front and flank; the struggle for victory was dreadful; the English bill-men laid hundreds dead at their feet, and Lennox and Argyle with many of the chiefs of the clans fell bravely fighting at the head of their men.

The left wing of the English was completely victorious, their enemies were routed and driven from the field and scattered in all directions; so much so, that they never again rallied. Stanley had now cut his way through all opposition to the top of the hill, from whence he could see the dreadful struggle that was going on in the centre and right wing; and he full well knew from the masses of men crowded together around the southern base of Piper's Hill—from the waving of flags and pennons—from the shrieks of the dying,

and from the clash of arms, that the battle was raging in all its fury to the west below him.. He hesitated not a moment; orders were given to his men, flushed and elated with success, to march in the direction of the combatants; and passing over the ground where the royal standard had fluttered before the battle had commenced, he rushed down with his forces in the rear of the king, where all now were contending and struggling for life and for victory.

Crawford and Montrose had been early engaged with the numerous forces under the Lord Admiral. The Scotch troops under these two commanders—chiefly composed of men from the interior counties of Scotland, together with several lords and knights, were fiercely attacked by the English forces. The contest raged with dire effect on both sides, but at last the valour and discipline of the men under the admiral prevailed, and Crawford and Montrose were counted amongst the slain.

The battle had now continued with unabated fury for more than three hours; the left wings belonging to both armies had been victorious; thousands lay dead and dying on the field; but the fate of the day was far from being decided. The king with his nobles spiritual and temporal had at the very first dismounted from their horses, and marched on foot with their divisions down the hill into the thickest of the fight. By this noble act of devotion he had shown to the men around him, that he was determined to conquer or to die. All were animated with the like enthusiasm, and all were resolved to fall in defence of their king and country.

Never were more noble devotedness and heroism displayed either in ancient or modern times, than was that day exhibited on the battle field by the king, his nobles, and his men. At last the Scotch were completely surrounded. The Earl of Surrey was in front, and on their right flank; Lord Thomas Howard on their left; and Sir Edward Stanley on their rear. Thus hemmed in on all sides, but not in despair, or in the least daunted or discouraged at their perilous and desperate position, they fought and fell, and victory oft-times trembled in the scale. The bill-men plyed their ghastly strokes, cutting through the helmet and plated armour, and the long spear did its fatal work. Men were falling fast on both sides; the shout and slogan cry that urge to the fight, that animate and strengthen the heart and hand on the day of battle, were heroically and defiantly uttered anon and anon by both combatants; there was no shrinking back, no standing still;

every hand was lifted up to strike, or bent to give the piercing stroke.

Wherever the king moved there was death ; the struggle for victory was most terrific, and so long as James was able to command and shew himself in the ranks of his men, the day was neither lost nor won. The endurance and intrepidity which had signalized him throughout the battle never forsook him, nor seemed to flag, and he had the happy method of inspiring all about him with the same heroic ardour. He and his nobles fought hand to hand with the English bill-men, and many of them were cut down, and fell around the king. All that men could do, was done on that fatal day. Scotland's glory, and England's fame were neither tarnished nor sullied by the combatants, for it is recorded in the page of history that the northern spear was even more fatal than the English axe or bill.

Fortune which had soared and lingered so long over the heads of both armies, now began to droop ; the king himself was wounded by an arrow, and soon after cut down by an English bill-man. He fell covered with honour amongst the slain of his nobles, who throughout the battle had never shrunk from death, but bravely to the last fought about their king, guarding his person, and protecting him from danger. Life was cheerfully given up in his defence by bishops, earls, lords, and knights, and the field was honoured with the dust of the noble dead, and saturated with the best and bravest blood of Scotland.

“ The English shafts in volleys hailed,
In headlong charge their horse assailed
Front, flank, and rear, the squadrons sweep
To break the Scottish circle deep,
That fought around their king.

But yet, though thick the shafts as snow,
Though charging knights like whirlwinds go,
Though bill-men ply the ghastly blow,
Unbroken was the ring.

The stubborn spearmen still made good
Their dark impenetrable wood,
Each stepping where his comrade stood,
The instant that he fell.

No thought was there of dastard flight,
Link'd in the serried phalanx tight
Groom fought like noble, squire like knight
As fearlessly and well.”

Never in any engagement do we read of such havoc amongst the leaders of an army, excepting when Hannibal fought

with the Roman Consul Varro ; it was in fact the Scottish Cannæ. Scarcely any family of note throughout the length and breadth of the land, who had not to mourn over the death of a father, a husband, a son, or a brother. Most nobly did they fulfil their sacred vows made on the Borough Moor, that they would defend their king with their last drop of blood.

The battle continued from 4 to 8 o'clock, or till darkness closed over the field of blood and carnage. Night alone put an end to the strife, for the combatants were only separated when they could not distinguish friend from foe. Numbers of the slain were stripped naked during the night, especially those who could be recognised by their armour as belonging to the nobles. The king, as well as his lords, underwent the same degradation ; there was no escaping the plundering propensities of the Borderers, both English and Scotch, and also of the men of Teviotdale and Tynedale. Bishop Ruthal in his letter, when speaking of the Borderers says, in the quaint language of the time : "The grettyst diffictie that I see therien is this, that such men of warre as shal be sent to the Borders, dow not trust the Borderers, whiche be falsar than Scott^s, and have done more harme at this tyme to o^r folk^s than the Scott^s dyd, and therefor if it wer Goddys pleas^{re} and the kyng^s, I wold all the horsmê on the Borders were in Fraunce w^t you, for as I have wretyn byfore, thay neû lyghtyd frô thayr hor^s, but when the bataylis joyned, than fell to ryflyng and robbyng as well on o^r syde as of the Scott^s."

There are various accounts recorded respecting the king's body, many of them bordering on the marvellous. It was the age of credulity and superstition ; nothing remarkable could take place unless it were involved in mystery. Every event bearing on the king's death, let it be of what nature it may, had its supporters and propagators, and the more it bore the semblance to a preposterous origin, the more it was revered and cherished throughout Scotland. By many it was believed that he did not fall in battle, that he was seen in the twilight of that eventful day crossing the Tweed in company with four other horsemen ; and by many it was firmly credited, that he had gone as a pilgrim to the Holy Land. By others it is affirmed that the king's body was found the day after the battle on the field dreadfully mutilated, and that it was recognised by several who were well acquainted with his person. These various reports bear

strong evidence that none of them could be relied upon with any degree of certainty; nor even at this day does history satisfactorily enlighten us on the subject. There is however no doubt but that he fell on the field, and in all probability was buried amongst the slain. Stripped of his armour, despoiled of all decorations belonging to his rank, covered with wounds, clotted with gore, and besmeared with blood, it would be almost impossible to distinguish him, with any degree of certainty, amongst so great a number of naked dead.

From ten to twelve thousand fell on the field with their king, and we may rely that nearly as many, if not an equal number on the side of the English, for whoever heard of a Scotchman being in battle without leaving indelible proofs that he had been there. It was the tug of Greek with Greek, and we may almost affirm that no quarter was either given or taken; everyone fought to the last—even the devotedness of Leonidas and his Spartan band at Thermopylæ, did not surpass the ardour and heroic valour of the king and those around him.

From such a number of slain, we may judge pretty accurately the number engaged in the battle. Scotland on the Borough Moor, counted one hundred thousand men; but certainly many of these returned home laden with plunder before the day of battle. Bishop Ruthal in his letter, mentions that 20,000 returned to their own country, after the taking of Norham Castle. Lindsay of Pitscottie, in his account of Flodden Field, says that Lady Heron in her letter to Surrey, diminishes the Scotch army to ten thousand men, and very shortly after the same historian mentions that the van-guard was given to Huntley and Home, who were in number ten thousand men, and the king took the great battle unto himself, with all the nobility of Scotland, which passed not above twenty thousand men. These conflicting and contradictory statements are of very little value; indeed, after all we must draw our own conclusions from the different circumstances bearing more particularly on the event. Scotland we know mourned for her dead, from the Palace to the humble cot; and England's forces were so shattered, crippled, and diminished in this fearful battle, that she durst not attack, or invade the territory of her foe. Both nations withdrew from the bloody strife terribly cut up and thinned in numbers, and not till the next day was it known which side was the victor.

We shall not therefore err far from the truth, when we assign to the different armies at the commencement of the battle something more than forty thousand each, besides horse soldiers, which in all probability would not be far from four or five thousand. The Borderers alone could muster strongly in this arm of the service, for they prided themselves in being inured to war from their boyhood, and always ready for the fray. Look at Lord Home's party called together in a few hours, to avenge the aggression of the English a short time previous to the battle. The king had only been a few weeks on English ground, and we know when he passed the Tweed his army consisted of one hundred thousand men. Such slaughter and carnage could not possibly be inflicted in so short a time by a less number, and we cannot upon calm reflection but conclude in assigning to each army the figures stated above. The effect of the battle was felt for generations after, and even at this day in Scotland, Flodden Field cannot be mentioned without a sensation of terror and sorrow. Sir Walter Scott remarks, that there is scarcely a Scottish family of eminence who does not number an ancestor killed at Flodden.

To town and tower, to down and dale,
To tell red Flodden's dismal tale,
And raise the universal wail,
Tradition, legend, tune and song,
Shall many an age that wail prolong,
Still from the sire the son shall hear,
Of the stern strife and carnage drear
Of Flodden's fatal field,
Where shivered was fair Scotland's spear
And broken was her shield.

Scotland wept and mourned her king and nobility; her bards sang her loss in plaintive strains, and England in descriptive verse. He was the most beloved monarch that ever filled the Scottish throne. "As he was greatly beloved while alive," says Buchanan, "so when dead his memory was cherished with an affection beyond what I have ever read or heard of being entertained for any other king." More poetry has been written about Flodden Field than any other battle since the days of Homer. Scott has immortalized Flodden in his inimitable poem of *Marmion*, every part of which bearing on the battle can be read over and over again, without in the least degree diminishing the grandeur and excitement that enthral the heart when first read; and which will continue to captivate and delight the soul of every one who understands the English language.

The morning after the battle the men under Lord Home were seen standing on the western end of the field, where they had the evening before been so hotly engaged, and where they had been completely victorious. The centre of the Scotch had never been broken, and it was quite uncertain during the night which nation could claim the victory, but as the day advanced the Scotch left the ground and all their guns on the top of the hill.

The death of the king, together with the loss of nearly all her nobility, would be known during the night or early the next morning throughout the remnant of the Scottish army. Besides the king and his natural son the Archbishop of St. Andrews, there were slain twelve earls, and fifteen lords and chiefs of clans; and to these we must also add the Bishop of Caithness and of the Isles, the Abbots of Inchaffray and Kilwinning, and the Dean of Glasgow.

When known in the English camp that the victory was theirs, Surrey immediately ordered solemn thanksgiving to be offered up to the Almighty, and afterwards he created forty knights on the field, disbanded his army, and returned to London, where all was joy and exultation.

Scarcely any one of note belonging to the English nobility fell on the field, which is a strong and undeniable proof that they did not risk their lives in the battle as the king and his nobles had done. The bow and the bill in the hands of the English yeomen did the deadly work, and by them were

“The flowers of the forest a’ wede away.”

PLATE X.

Map of Flodden Field and of Surrey's March.

PLATE XI.

1. Arrangements of the Troops before the battle.
2. A View of the Battle-ground of Flodden Field.

An Account of the opening of Two Barrows situated in the parish of Ford, and County of Northumberland, on June 22nd and July 1st, 1858. By the Rev. WILLIAM GREENWELL.

THE two barrows are placed on the south slope of the range of low sandstone hills which skirt the valley of the Till on the south, and are situated about one mile south-east from the village of Ford. The immediate neighbourhood is filled with the works of the natives of pre-historic times. Close by is the fortified place at the Rowtin Lynn, with the rock inscribed with those mysterious circles, which though now found spread over a wide area in Britain and Ireland, have as yet baffled all interpretation of their meaning; nearer still to the barrows, are two rocks with similar markings to those on the Rowtin Lynn rock; whilst from time to time the plough, or the hand of the waller, has brought to light urns, bones, and flints, the relics of the sepultures of a bygone race. The two barrows which were opened, are not the only two which remain, uninjured by cultivation, on the slope and summit of the hills in this locality; they were selected from among those that still exist, on account of their larger size, and from their presenting no indication of ever having been disturbed by the hand of man. They both were formed, as regards the upper part of the barrow, of the rough sandstone of the district, which is found in convenient proximity, covering the surface of the ground. When first raised the barrow was probably a cairn of stones, for the mixture of earth found among the stones is apparently due to the decay of the vegetable growth of centuries, rather than to any original deposit of earth. The lower part of the barrows, in which alone were found any remains of urns or bones, consisted of earth, bearing, from its blackened appearance, evident marks of fire.

The largest and most prominent barrow was sixteen feet in diameter, and rose about three feet above the ordinary level of the ground. It was enclosed by a circle of stones, set on edge and close to each other; the inner diameter of this circle measured twelve feet; the space of four feet, which remains to make up the outer diameter, was made up of the stones of the circle, and of smaller stones and earth heaped upon and around them. The principal interment was in the centre of the barrow, and on a level with the surface of the

ground, it was contained in a cist, formed by four stones set on edge, in the form of an oblong square, with a large irregular shaped covering stone, which projected beyond the line of the sides ; the joints of the four side stones were filled in with clay. The cist lay north and south, and measured two feet eleven inches in length, by two feet in breadth, and had a depth of one foot seven inches. The bleached appearance of the inside of the cist, when first, after so long an interval, the light was admitted, was very striking, and pointed to the lapse of many a century since last it had seen the day. The sole contents were an urn and a fragment of the skull of a child, of about three or four years of age, both of which were found at the north end of the cist, the urn empty and standing on its base, the fragment of skull lying beside it. The urn—*Plate XII., fig. 1*—is four inches high, and four and a quarter inches wide at the mouth ; it is of the ordinary flower-pot shape, of a greyish brown colour, well formed, apparently on the wheel, and entirely covered with short incised lines arranged herring-bone fashion. There was no indication that any other bones had ever occupied the cist, the fragment which was found was perfectly fresh, as though it had only been buried some few years, and strange as it may seem, it appears as if this portion only of the body had been placed in the tomb, for why should it remain quite fresh, and the other bones have totally gone to decay ? In a notice of the opening of a cist at Broomhill, near Dunse, an account of which is given in vol. iii. of our Transactions, p. 157, it is related that the sole contents were an urn, a portion of a skull and a few fragments of bones, so preserved as to make it difficult to account for the absence of the remainder ; and in many cases where undisturbed cists have been opened, no remains of bones have been found. Whether in the Broomhill barrow there had ever been more of the body interred than the bones discovered, must remain a disputed point until we have the evidence of more interments to guide us to the truth. There is, however, one singular fact which we learn from this place of burial, which is this, that the principal interment was that of a very young child. Some have held that only the chiefs of tribes, or other notable persons, were honoured with the raised mound over their remains, whilst the lower members of the tribe were buried without any mark to distinguish where they rested ; nor indeed does this view seem an improbable one, when we consider how few are the barrows, even in a district so thickly peopled as must have been north

Northumberland in British days. Here however we have a barrow covering an infant's grave, and, without wandering into the realms of fancy, we may, I think, safely predicate of this memorial, that it marks the spot where the much loved and early lost child of some honoured chief and warrior was interred.*

The covering stone of the cist bore on its upper surface the marks of fire, the indications of cremation contemporary with the central interment. Outside the cist were the remains of six or seven bodies, all burnt and enclosed in urns, but the whole, with one exception, so much decayed, that only very slight indications of bones or urns were apparent; three of the urns were covered, each with a small flat stone. One urn—*Plate XII., fig. 2*—was removed in a perfect state; it is rudely hand-formed,† with a few irregular and ill-arranged lines, of the usual character, on the upper part; it measures ten and a half inches in height, by nine inches in width at the mouth. It was inverted, and filled with the imperfectly burnt bones of a young person of 16 or 18 years of age; among the bones were some pieces of burnt wood, together with a rude flint arrow head—*Plate XII., fig. 3*—and a bone pin, which had both been burnt with the body. The mouth of the urn was filled with clay to preserve the bones from falling out. A single piece of calcined flint was found among the decayed urns and bones, and there was no indication of metal throughout the barrow. Outside the enclosing circle of stones was a single interment, a small urn filled with burnt bones, but equally decayed with those within the circle.

It was evident, from the burnt appearance of the earth, and covering stone, and from small fragments of burnt wood occurring here and there, that some, if not all, of the bodies had been consumed on the site of the barrow, and at a subsequent period, though one perhaps only of hours, to the formation of the cist.

The second barrow, almost identical in shape and size with the first one, was situated about one hundred yards north of it, and was formed of similar materials and in a similar manner, with the exception that there was no enclosing circle of

* During the course of this year (1862) a cist was discovered at North Sunderland, which contained, besides three elaborately ornamented urns, the skeleton of a female of about twelve years of age.

† These sepulchral urns appear, in many cases, to have been made for the occasion, and the hot ashes seem to have been placed in them whilst they were still pliant and soft; in fact the only baking they got was probably due to the heat generated by the calcined bones which they contained.

stones. On removing the stones of which the mound was formed, there was found upon the original and undisturbed surface of the ground, a thin stratum of burnt bones, wood, and earth. This band of burnt matter was about two inches thick; scattered irregularly throughout it were many small fragments of urns, and pieces of flint, uncalcined. The burnt matter was not found throughout the whole surface but only in patches. There was no indication that there had ever been a whole urn interred, the fragments were very various in texture and colour, and seemed to be portions of many vessels, having the appearance, both in colour and hardness, of having been burnt as fragments,* along with the bones and wood. The barrow had never been disturbed, the stratum of burnt matter being quite regular and unbroken. A careful examination of the surface of the ground, and of the stratum of burnt matter, shewed that one or more bodies had been burnt, with pieces of pottery, and that then the remains, with flint flakes added, had been deposited in thin patches on the ground, and the mound of stones raised over them. There had never been a cist, or apparently any unburnt body, in the barrow.

Such records as the above may seem trivial to many persons, and it may appear as though we have had, in various archæological publications, notices of the opening of barrows so often as to become wearisome, but it is only by the record of many interments that we can arrive at any just conclusion as to the mode and circumstances of the burial of the early inhabitants of Britain, and so through their burial rites, always sacred and religious, at a knowledge of their religion, habits, and social relations.

* Such fragments are not of unfrequent occurrence in sepulchral interments. Mr. Carrington found in a barrow, at Little Lea, Castern, shreds of an urn, a bone pin, and several flints, which had all been exposed to the fire which had consumed the body. See Bateman's *Ten Years Diggings*, p. 190. Similar deposits have been found in very many instances in barrows, which have been examined in various parts of Germany. It is probable that this custom of placing broken pot-sherds, and flint flakes, in the tomb, may have a religious significance which as yet we cannot explain. From the frequency of their occurrence we cannot suppose them to have been accidentally deposited, and their being found associated with the dead, is strong evidence of their being linked to some religious chord in the faith of these ancient people. A passage in *Hamlet*, Act. v. Scene 1, may have originated in a lingering remembrance of this custom, where the priest, answering Laertes, relative to the burial of Ophelia, says,—

Her death was doubtful;
And, but that great command o'ersways the order,
She should in ground unsanctified have lodged
Till the last trumpet; for charitable prayers,
Shards, flints, and pebbles, should be thrown on her.

The facts, which the first barrow here described discloses, suggest many questions, hard perhaps to solve, but worthy of solution, and are indeed of the highest interest. Why were some bodies buried unburnt, whilst others were consumed by fire? Were the burnt bodies those of slaves or wives, killed to be ready for the chief in the land of the departed? What was the purpose of the small urn placed by the side of the corpse? Did it contain food for the use of the departed, in the interval whilst he lay in the tomb? The flint arrow-head or the bronze spear laid beside the hunter and warrior, or enclosed in the urn among the calcined bones, speak of war and the chase in other worlds, or, as some think, they tell of a purpose accomplished with their owner's death; but what mean the flint flakes,* mere shapeless chippings, of which so many are found, accompanying the old interments? These and many similar enquiries suggest themselves on the opening of a barrow, and it is only by the record of many such openings that we can hope for an answer to them all.

Summary of points suggested by the BERWICKSHIRE NATURALISTS' CLUB as deserving of observation during the progress of the Berwickshire Railway, 1862.

MANY discoveries of Geological and Antiquarian interest having been made in opening out lines of new railways, the following Summary has been drawn out with the view of indicating to the Contractors for the Berwickshire Railway, and other parties interested in such matters, the points to which their attention should more particularly be directed.

I. GEOLOGY. (1.) *Old Rocks.*

1. The lines of junction between different rock formations are of interest;—as between the igneous rocks (*i. e.* whinstone, greenstone, porphyry, &c.) and sedimentary rocks (*i. e.* sandstones, slates, &c.);—or as between sedimentary rocks of different ages,—to see how the more recent rocks have been deposited over the edges of the older rocks, after the latter had been elevated and contorted.

2. Any metals or unusual minerals and crystals in the rocks are of interest; and specimens of them should be laid aside.

3. Any appearances of fossil remains, (*i. e.* the bones or teeth of animals, scales of fish, shells or impressions of shells

* In 1861, about half a mile west of these barrows, were found, under a large flat stone, the upper surface of which was exposed to the day, more than three-score flint flakes, laid in a heap, but without any appearance of bones, or of there ever having been an interment there.

or corals, or the stems and leaves of plants,) are of interest, and should be as little injured as possible,—so as to allow drawings to be made on the spot.

(2.) *Superficial Deposits.*

1. Much interest attaches to the way in which the old rocks are covered by beds of clay, gravel, and sand.

Observe particularly whether these old rocks appear to have been ground down and smoothed, by the passage over them of some heavy and rough materials.

Observe also whether the rocks when thus smoothed, are scratched or rutted on their surface,—as if hard and sharp stones had passed over them.

Endeavour to ascertain, from what direction the smoothing and scratching agent has come,—by noticing on which side the rocks are most and least smoothed respectively.

2. It is important to observe what are the materials composing the different beds covering the old rocks, (*i. e.* whether clay, sand, gravel, or great boulders.)

3. If any fossils should be found in these beds, such as bones or teeth of animals, shells, or plants,—these should be carefully preserved, and their position marked.

4. Take notice whether the clay beds consist exclusively of clay, or whether they contain stones either large or small.

5. Take notice whether the boulders are scratched;—and if so, mark in what direction the scratches point.

6. If the boulders or other stones are not spherical or square, but are much longer than they are broad,—observe whether, generally speaking, they lie parallel—*i. e.* whether their longer axes point in the same direction, and coincide with the lines of scratches.

II. ANTIQUITIES.

1. Any coins, and weapons or other implements, whether made of stone, wood, or metal, should be carefully preserved, and a note taken of the place and stratum in which they were found.

2. Any sculptured stones or stones bearing inscriptions should be taken care of.

3. If any graves or skeletons are discovered, they should remain undisturbed until they are properly examined, and the greatest care should be taken to preserve skulls or urns from being broken or injured.

In the event of any discoveries being made under any of the above heads, notice thereof to be sent to Mr. STEVENSON, Accountant, Dunse.

The Lichen Flora of the Eastern Borders. By JAMES
HARDY.

"Difficile quidem, ac periculosum est hujus generis plantas exacte distribuere; tum quod raro. admodum inveniuntur omnino perfectæ, flore scilicet, semineque ornatæ; tum quod ex iis aliquæ sint adeo parvæ, ut neque microscopio inspectæ structuræ earum ne dum flores deprehendi queant."—MICHELI, *Nov. Plantarum Genera*, p. 73, 74.

1. *Lichina*, *Ag.*

1. *L. PYGMÆA*, *Lightf.* On rocks about high-water mark, common.
2. *L. CONFINIS*, *Ach.* On rocks at and above high-water mark, common.

2. *Ephebe*, *Fries.*

1. *E. PUBESCENS*, *Ach.* In chinks of rocks in damp shady places. N. "On Cheviot." *Bot. G. North.* ii. p. 63. B. In a very dwarf state at Lowrey's Knowes, near Dowlaw, and rocks on the Whitadder, below Edin's Hold.

3. *Collema*, *Hoffm.*

1. *C. FURVUM*, *Ach.* B. Rare; a few dwarf rosettes attached to greywacke rocks by the side of the burn in the lower part of Dowlaw dean. In Silesia Koerber found it on greywacke as well as on calcareous rocks. It resembles a diminutive state of *Synechoblastus flaccidus*.

2. *C. PULPOSUM*, *Bernh.* Clayey soil, especially on the sea-banks; also among rocks, and on old buildings. N. Bamborough Castle, Ratcheugh, Humbleton dean, Routin Linn. D. Hudshead. B. Berwick, and along the whole Berwickshire coast; Railway banks; Langton Wood; Greenlaw, &c.

γ. *LIMOSUM*, *Ach.* B. Sea-coast at Eastern Hole, near Cockburnspath Cove.

δ. *CRISTATUM*, *Borr.* Common, on the sea-banks. The specimen marked *Collema nigrum*, in Dr. Johnston's Herbarium, belongs to *C. pulposum*. *C. nigrum*, *Ber. Flor.* ii. p. 78.

3. *C. CRISPUM*, *Borr.* B. Rare. Among soil mixed with lime on a stone wall near Greenheugh. The specimens are fully as characteristic as a Sussex example from Mr. Unwin.

4. *C. FLUVIATILE*, *Huds.* B. Rare. On rocks constantly moistened by water, and at times quite immersed, in the bed of the Whitadder, above and below the Retreat, bearing apothecia.

4. *Synechoblastus*, *Trevis.*

1. *S. FLACCIDUS*, *Ach.* On rocks in streams and by the sides of waterfalls. N. "On rocks in Wooler water, above Langleyford." *Winch.* I have found it there and on the Lill-burn. B. Whitadder; Pease bridge; Cockburnspath Tower dean; Dowlaw dean, &c.

2. *S. NIGRESCENS*, *L.* On trees, Langton Lees Cleugh. *Rev. Thomas Brown.* The specimens are in Dr. Johnston's Herbarium.

5. *Mallotium*, *Fw.*

1. *M. SATURNINUM*, *Dicks.* N. "On stones above Langleyford at the foot of Cheviot." *Winch.* This I have not yet found.

6. *Leptogium*, *Fries.*

1. *L. LACERUM*, *Swartz.* On stones in burns among mosses, and on old walls in shady places. N. Coldgate or Wooler water above Langleyford; House of Crag; Humbleton dean; Routin Linn. B. Deans in Penmanshiel Wood; Dowlaw dean; Pease and Cockburnspath Tower deans, &c. In fruit.

2. *L. SINUATUM*, *Huds.* Among mosses growing on stones in burns. N. Humbleton dean. B. Whitadder at the Retreat; Coll Mill burn at Coldingham, apothecia numerous.

7. *Polychidium*, *Ach.*

1. *P. MUSCICOLUM*, *Swartz.* Among rocks by water sides in upland places. Rare. N. "Cheviot." *Winch.* B. Rocks on the Whitadder below the Retreat, with apothecia.

8. *Cladonia*, *Hoffm.*

1. *C. ALCICORNIS*, *Lighf.* Sandy soil among rocks, rare. N. "Rocky point near Bamborough." *J. V. Thompson's* Berwick Plants, p. 110. B. On the sea-banks below Lumsden, and in a very limited patch among rocks on the Whitadder below the Retreat.

2. *C. PYXIDATA*, *L.* Common on barren moors and banks, and on wall-tops, subject to great variety.

β. *FIMBRIATA*, *L.* In similar localities.

3. *C. GRACILIS*, *L.* γ. *HYBRIDA*, *Fries.* On barren peaty moors, frequent.

δ. *DEGENERANS*, *Flk.* *C. ANOMÆA*, *Sm.* N. Wall-top behind the Sneer-hill. B. Moors near Penmanshiel, Dowlaw, and Quixwood, exactly corresponding with the figure of Dillenius. *Winch*, *Flora of North*, p. 157, represents the sub-var. *E. CARIOSA*, as "not rare," "on Cheviot and other barren moors."

4. *C. SQUAMOSA*, *Hoffm.* δ. *DELICATA*, *Ehrh.* "Cheviot." *Winch.* I have seen no traces of this species in the district.

5. *C. FURCATA*, *Huds.* Barren peaty moors, common. The var. *DECUMBENS*, *Mudd.*, occurs in wet places, on Cheviot, Dowlaw, and Penmanshiel moors.

6. *C. RANGIFERINA*, *L.* On moist moors and in woods, occupying large spaces. Spenser, in the *Faery Queen*, mentions "the bare ground with hoary moss bestrowed."

7. *C. UNCIALIS*, *L.* On moist upland moors. All the varieties.

8. *C. PAPILLARIA*, *Ehrh.* Barren moors, not very common. N. "Cheviot and Hedgehope." *Winch.* B. Earnslaw or Piperton hill, high land near Penmanshiel and Dowlaw mosses.

9. *C. COCCIFERA*, *L.* α. *CORNUCOPIOIDES*, *L.* On barren moors, and among rocks, common.

β. *BELLIDIFLORA*, *Ach.* N. "Cheviot." *Dr. James Thompson.* Wall-top behind the Sneer-hill, one of the Cheviots. B. Near St. David's Cairn, and on Coldingham Moor.

δ. *DEFORMIS*, *L.* N. Top of a March fence to the north of the Sneer-hill. B. Cockburnlaw, Moss Maw near St. David's Cairn, &c.

ε. *DIGITATA*, *Hoffm.* On decayed stumps, and on the trunks of old trees, &c. Common in shady woods.

η. *MACILENTA*, *Ehrh.* N. Foot of Cheviot. B. Bowshiel dean, &c. Sub-var.

B. CORYMBIFORMIS. N. March fence behind the Sneer-hill. Sub-vars. C. FILIFORMIS, *Relhan*, and D. OBTUSA, *Schaer*. N. Whitsunbank hill, Ford-hill. B. Cockburnlaw, Coldingham Moor.

The diversities in the species of this genus are multiform. Linnæus, *Flor. Lapp.* p. 246, humourously recommends the student of its varieties to go to Lapland.

9. *Bæomyces*, *Pers.*

1. B. BYSSOIDES, *L.* On earth on old roads in woods, on old sod-laid wall-tops, on moors, and sometimes on stones, common. Koerber says the dusty dissolved sterile thallus forms "*Lepraria incana*." (*Syst. Lich. Germ.* p. 374.)

2. B. ROSEUS, *Pers.* On wet high peaty soils. N. On Cheviot in ascending from the Henhole. B. Moor at Penmanshiel; near Quixwood; Monynut hill or Laughing Law, &c.

10. *Icmadophila*, *Ehrh.*

1. I. ÆRUGINOSA, *Scop.* Moist peaty moors. N. Cheviot on the ascent where the Cloudberry commences, and on the summit; Hedgehope; back of Newton Tor. B. Coldingham Moor, moor near Quixwood, &c.

11. *Stereocaulon*, *Schreb.*

1. S. PASCHALE, *L.* var. γ . ALPINUM, *Laur.* Among rocks and moss, near the summit of Cheviot and Hedgehope, and Newton Tor. With apothecia on Hedgehope.

2. S. CONDENSATUM, *Haffm.* On old roads on moors, worn down to the gravel. Near Quixwood, the Blakelaws, and Oldcambus moss; Black Craig, Pease dean. "The thallus (*i. e.* the stipes,) often fails, in which case the apothecia, unless they are absent, are adnate on the thick crustaceous protothallus, which is often transpierced by parasitic Ephebe threads. Such forms promise, as Schaerer had previously indicated, an obvious resemblance to *Lecidea sabuletorum*." *Koerber*, *Syst. Lich. Germ.*, p. 13. Black parasites appear on the crust of our specimens, and look like apothecia till the lens is applied, but when moistened they are seen to be a Tremella and not an Ephebe.

3. S. NANUM, *Ach.* Rare. N. On clay in the fissures of rocks above Coldgate Mill. B. Head of Dowlaw dean.

12. *Usnea*, *Dill.*

1. U. BARBATA, *L.* α . FLORIDA, *L.* On trunks and branches of old trees, particularly pine-trees and birches; fructifying finely on the latter in Penmanshiel Wood.

β . HIRTA, *L.* "Banks below Marshall Meadows." *J. V. Thompson*, *Ber. Plants*, p. 111. "On rocks" there. *Herb. Johnston*.

On the moor near Dowlaw this species appears to spring immediately from the peaty soil, but on examination it will be found to be parasitic on minute fragments or stems of heather.

13. *Alectoria*, *Ach.*

1. A. JUBATA, *L.* On trunks and branches of old trees, common.

β . CHALYBEIFORMIS, *L.* On rocks and wall-tops. N. Cheviot, Hedgehope,

House of Craig or Horsey Crag, Homilheugh, &c. B. Rocks near Dowlaw, walls at Penmanshiel, &c.

2. A. BICOLOR, *Ehrh.* On moss and dead grass, at Lowrey's Knowes near Dowlaw, in dense entangled short bushy tufts, not half an inch in height, of a grey green tint above, but black at the base. Though dwarfed in its proportions, it has the habit of the more luxuriant state. A. Chalybeiformis grows beside it, and in one instance through it, but retains its own characteristics. The height of the locality will be about 700 feet above the sea. On Ben Lawers 1000 feet is near its place of growth. It is remarkable to find it isolated here, and occupying not a square yard of surface.

14. *Evernia, Ach.*

1. E. FURFURACEA, *L.* On rocks. N. "On Cheviot and Hedgehope." *Winch*; but I never saw it on either of them. "On the walls of Chillingham Park at Rawse Castle; plentiful." *Dr. Johnston.* Abundant on sandstone at Cockenheugh, and Great Heddon, and also on Ford Hill.

2. E. PRUNASTRI, *L.* On trees, common, also on stones. "On willows soft and on sloes white." *Dillenius.* In fructification on old firs and birches, and on stems of heather, near Penmanshiel. The fructifying specimens are ruptured and shabby-looking,—

"Tatter'd and stain'd—all weather worn."

The spormogonia are black, but brown fungus specks often occupy the branches along with them.

15. *Ramalina, Ach.*

1. R. CALICARIS, *L.* α. FRAXINEA, *L.* Common on the trunks and branches of various trees. Squirrels have been observed to eat this lichen. *Gard. Chron.* 1844, p. 28.

β. FASTIGIATA, *Pers.* On trees and sometimes on rocks, common.

γ. CANALICULATA, *Fries.* Along with the last.

δ. THRAUSTA, *Ach.* On oaks Penmanshiel Wood, and on willow bushes in moors.

ε. FARINACEA, *L.* On trees and rocks, common.

2. R. SCOPULORUM, *Retz.* *Dr. Johnston* points out two sub-varieties, the first pendulous, occurs on "precipitous rocks below Marshall Meadows;" in Dowlaw dean, Spindleston-heugh, Easington rocks. The caespitose state is common among sea-rocks, in Berwickshire, North Durham, and Northumberland.

β. POLYMORPHA, *Ach.* N. Among rocks, House of Crag, near Langleyford. It is nearly as luxuriant as the pendulous state of *scopulorum*.

16. *Cornicularia, Ach.*

1. C. TRISTIS, *Weber.* N. Rocks near the summit of Cheviot and Hedgehope; top of Newton Tor, and Fredon Hill.

2. C. ACULEATA, *Ehrh.* On peaty soils. N. Cheviot, Whitsunbank hill, Homilheugh, top of Newton Tor. B. Coldingham Moor, Lammermoors.

17. *Cetraria, Ach.*

1. C. ISLANDICA, *L.* On barren peaty soil, not very common. N. Cheviot

and Hedgehope. "About the Quarry on Sunnyside; Murton Craigs, D; moors west of Belford." *Thompson's Plants of Berwick*, p. 109. "Lamberton Moor, plentiful;" "On the Lammermuirs not unfrequent." *Dr. Johnston*. Coldingham Moor near Oldecambus Moss.

2. *C. GLAUCA*, *L.* On mossy trees, stems of heather, and rocks. N. Common on the hills about Wooler, and the lower Cheviots, top of Newton Tor, &c. B. "Below Marshall Meadows." *J. V. Thompson*. "Lamberton Moor," *Dr. Johnston*. Cockburnlaw, Coldingham Moor, &c.

β. *FALLAX*, *Weber*, In similar places with the preceding.

3. *C. SEPINCOLA*, *Ehrh.* Scarce. N. On rocks, House of Craig or Horsey Crag, where there is a good deal of it; wall of Whitsunbank Hill, one specimen; Ford Woodhouse Hill, and Ford Hill. B. Old Scotch pines in Penmanshiel Wood, and the Lower "Folly," and a scattered plant or two on stones near Dowlaw Moss. In none of the systematic works is it said to grow on stones, but Dr. Patrick Neill found it on the summit of the Wart Hill of Hoy, 1600 feet high (*Scots Mag.*, 1805, p. 183); and Mr. Ralfs in Wales, "on the largest of the stones called the Giant's Pebbles by a small pool on the road from Dolgelly to Tal-y-llyn." (*Ann. and Mag. N. H.* xiii. p. 263.) Mr. Dickson also found it on stones. *Hook. Brit. Fl.* ii. p. 220.

18. *Sphærophoron*, *Pers.*

1. *S. CORALLOIDES*, *Pers.* On rocks among moss, and on trees along with the var. *FRAGILE*, *L.* N. Cheviot and Hedgehope, top of Newton Tor, House of Crag, Ford Hill, &c. B. "Below Marshall Meadows." *J. V. Thompson*. Cockburnlaw near the Retreat, Twinlaw Cairn, Bowshiel dean, Lowrey's Knowes near Dowlaw, &c. D. "Murton Craigs." *Dr. Johnston*.

2. *S. COMPRESSUM*, *Ach.* "Cheviot and Hedgehope," *Winch*, but I have sought in vain for specimens. It is probably rare. The example marked *S. FRAGILE*, in Dr. Johnston's Herbarium, belongs to this. The locality is not given, but the reference is to the Ber. Flor. ii. 97. "The thallus is pale, of a peculiar frosted, rigid, coralline aspect, compressed, the ultimate branches lobed or articulated, terminating in a rounded or oblong swollen apex." *Leighton's British Angiocarpous Lichens*, p. 9.

19. *Nephroma*, *Ach.*

1. *N. LÆVIGATUM*, *Ach.* Among moss on rocks in shady deans, and by watersides, and also on the sea-banks. N. By Coldgate water from Langleyford to Harthope Linn, Henhole, House of Crag, base of Homilheugh, &c. B. "Penmanshiel Wood; wood above the Retreat." *Dr. Johnston*. Dowlaw dean, sea-banks between Dowlaw and Redheugh, &c.

20. *Peltigera*, *Willd.*

1. *P. APTHOSA*, *L.* Among moss on rocks in damp shady localities, rare. N. "Foot of Cheviot near Langleyford." *J. V. Thompson*, 1807. It grows at Harthope Linn above the Hope, which is probably also Winch's locality. Near a linn among rocks bordering Care-burn; also at the mouth of Henhole dean. B. "On rocks west from Longformacus Manse, sparingly." *Rev. Thomas Brown*. "Near Abbey St. Bathans." *Dr. Johnston*.

2. *P. CANINA*, *L.* Among grass, and on the ground, in heaths and woods, common.

β. *RUFESCENS*, *Hoffm.* In similar localities with the preceding, and perhaps more abundant.

γ. *LIMBATA*, *Delise.* B. On stones in the burn, Dowlaw dean, Kitchencleugh, and Red Clues Cleugh; among rocks and at the base of trees, on the west bank of the Whitadder, below Edin's Hold; on the trunk of an ash on the south side of Bowshiel dean.

ε. *PUSILLA*, *Dill.* "On the banks at Hudshead." *Dr. Johnston.* *Peltidea spuria*, Ber. Flor. ii. 74!

This and the next species have the upper surface eaten by a black hairy beetle larva. It is also variously mined by another insect larva, whose nature I have not ascertained.

3. *P. POLYDACTYLA*, *Necker.* On the ground among moss, &c., in woods, and on heaths. B. On old roads, &c., in Penmanshiel Wood, moors near Penmanshiel, Dowlaw Moss, and Quixwood. N. House of Crag, and near the side of Care-burn, an affluent of Coldgate water.

4. *P. HORIZONTALIS*, *L.* On rocks by the sides of upland streams. N. Coldgate water above and below Langleyford; Broadstruther burn where it unites with Common-burn, to form Care-burn. B. On the Whitadder at the Retreat, and below Edin's Hold; on Monynut water below Strafontane (Tresfontaines).

5. *P. VENOSA*, *L.* Rare. B. On earth at the side of Monynut water, above Godscroft.

21. *Sticta*, *Schreb.*

1. *S. PULMONARIA*, *L.* On moss-grown trunks of trees. N. "Foot of Cheviot, above Langleyford." *Winch.* B. "On the ash at Longformacus." *Dr. Johnston.* "Langton Lees Cleugh, in fruit, plentiful." *Rev. Thos. Brown.* In deans in Penmanshiel Wood, on oak, ash, and hazel.

2. *S. SCROBICULATA*, *Scop.* On rocks, and trunks of trees, more common. N. "Rawse Castle." *Dr. Johnston.* "Foot of Cheviot above Langleyford." *Winch.* Among rocks on the Sneer-hill near the road to Langleyford; and at the base of Homilheugh. B. "Penmanshiel Wood; wooded banks of the Dye above Longformacus, and in woods above Renton Inn." *Dr. Johnston.* On hazel below the Pease Bridge; rocks at St. Helen's Church; on the sea-banks near Dowlaw, and below the Retreat.

3. *S. SYLVATICA*, *L.* By the side of Coldgate water, among rocks below and near Harthope Linn. This appears to be Mr. Winch's locality. Flora of Northumberland and Durham, p. 90.

4. *S. FULIGINOSA*, *Dicks.* Among mossy rocks; N. A few dwarf specimens along with the preceding at Harthope Linn. B. "Langton Lees Cleugh." *Rev. Thos. Brown.* It used to grow on the northern exposure of the dean above the forester's house, Penmanshiel Wood, but has disappeared since the wood grew up.

5. *S. LIMBATA*, *Smith.* Among moss on rocks, and on trees. N. "Foot of Cheviot above Langleyford." *Winch.* B. Rocks near the Black Craig, Pease dean; and on a tree in the dean behind the forester's house, Penmanshiel Wood, scarce; more plentiful among rocks near the linn at Dowlaw dean.

6. *S. HERBACEA*, *Huds.* B. Among moss on moist rocks in the North Cleugh, Penmanshiel Wood. This state belongs to the var. *microphyllina* of Schærer. It has the peculiar smell of the *Stictas*, but fainter.

S. glomulifera does not occur with us, but Mr. Jerdon has sent it from Minto Crags, Roxburghshire.

22. *Parmelia*, *Ach.*

1. *P. PERLATA*, *Ach. a.* B. On the mossy trunk of an old elder, Kitchencleugh.

β. *CILIATA*, *D. C.* B. On shady mossy rocks in the dean at Oldcambus; and on old oak trees in Kitchencleugh and on Ewieside.

2. *P. SAXATILIS*, *L.* On stones, trunks of trees, and wall-tops, common.

δ. *OMPHALODES*, *L.* On stones on the higher moors.

3. *P. PHYSODES*, *L.* On trees, stones, and stems of heath, common. In Sweden it is so much attached to the bark of the birch that Linnæus says scarcely any tree is free of it. *Flor. Suec.* p. 346, ed. 1.

4. *P. OLIVACEA*, *L.* On trees, stones, and tops of stone-walls, common.

γ. *FURFURACEA*, *Schaer.* B. On dwarf birch bushes, and on hawthorns, Penmanshiel Moor. Massalongo and Koerber consider this as a good species, *Imbricaria aspera*, *Mass. Koerb. Syst. Lich. Germ.* p. 78. A variety with the outline of the thallus much divided, the surface much varnished, either pale or dark olive, the apothecia smallish, concave, concolorous, the margin paler, inflexed, entire, occurs on rocks on barren heights exposed to the sun: var., *AQUILOIDES*, *Linds.* It is so peculiar that the Rev. W. A. Leighton took it for a state of *P. Fahlunensis*. B. "Sweethope hill, and not uncommon both in Berwick and Roxburghshires," *Rev. Thomas Brown*, in *Herb. Johnst.*! Rocks near St. Helen's Church. N. Spindleston-heugh, and Chesterhill Crags.

5. *P. FAHLUNENSIS*, *L.* N. "Cheviot." *Winch.* With apothecia, near the summit of Hedgehope; House of Crag.

6. *P. LANATA*, *L.* On rocks near the summits of Cheviot and Hedgehope; not uncommon. This seems to be indicated by Wallis in his *Hist. of Northd.* i. p. 260.

7. *P. CAPERATA*, *Dill.* Among shady rocks. N. Spindleston-heugh, near the Laidley-worm Trough; Chesterhill rocks, near Belford. B. "Hairy-heugh crags." *Rev. Thomas Brown.* Near Oldcambus West Mains, but rare.

8. *P. CONSPERSA*, *Ehrh.* Open, sunny rocks. N. Chesterhill and Easington Crags; near Wooler; rocks on Care-burn; Sneer-hill below Langlee; Whitelaw; Homilheugh; below Heathpool, &c. B. "On rocks by the side of the Whitadder, about the Retreat, abundant." *Dr. Johnston.* "Sweethope and Hairy-heugh crags." *Rev. Thomas Brown.* Walls near Gordon, rocks near St. Helen's Church, Bowshiel dean, &c.

9. *P. INCURVA*, *Pers.* N. "Upon porphyry on Hedgehope and Cheviot." *Winch.* I only saw it once on this rock at Goldscleugh. On sandstone, Whitsunbank Hill; Ford hill; and rather plentiful in fruit on the moor behind Cockenheugh, at the edge of Holborn Moss.

10. *MOUGEOTII*, *Schaer.* On stones on Coldingham Moor, walls at Penmanshiel, and on the moors near Godscroft, Monynut, Quixwood, Ordweill, &c., frequent.

23. *Borreria*, *Ach. Emend.*

1. *B. CILIARIS*, *L.* On rocks, and trunks of trees, scarce. D. "Fair

Island." *J. V. Thompson.* B. "Lamberton Moor." *Dr. Johnston.* Occasionally on dikes at Penmanshiel, and Oldcambus.

2. *B. HISPIDA, Dill.* On trees, rocks, and old walls, common. "Whitest on the sloe." *Dillenius.*

3. *B. CÆSIA, Hoffm.* On walls, roofs of houses, stones near water, and in channels of streams, generally diffused, N. and B.

β. *TRIBACEA, Ach.* Overrunning mosses and *Jungermannia*, on the trunk of an ash-tree in a dean on the College, below Heathpool linn. It agrees with specimens from the Rev. T. Salwey. See his remarks on this plant in his "Observations on Penzance Lichens," p. 146.

γ. *ALBINEA, Ach.* Some plants closely approaching to this state grow on the wall-top of the sea-bank near Siccar-point.

4. *B. STELLARIS, L.* Trunks and branches of trees, common.

5. *B. OBSCURA, Ehrh.* Tops of stone walls and on rocks, not very common. N. Between Budle and Bamfrough, and near Bamfrough Castle and village; wall near Yeavinger; and Whiteside hill. B. Walls near Penmanshiel, and Siccar point; rocks near St. Helen's Church, in Dowlaw dean, and near the Retreat.

6. *B. PULVERULENTA, Schreb.* On very old trees, especially those about villages, and old onsteads, and occasionally on old stone walls. On some old ash trees on Spindlestone-heugh it is so degenerate as to appear like a diminutive *Lecanora* with a green thallus.

7. *B. AQUILA, Ach.* On rocks not far from the sea, along the whole coast from Cockburnspath Cove to Bamfrough. Inland on rocks at Sweethope and Hairy-heugh. *Rev. Thomas Brown.* [Minto Crags, Roxburgh, *A. Jerdon, Esq.*]; N. Spindlestone-heugh; Chester hill Crags; near Humbleton Mill.

23. *Physcia, Schreb.*

1. *P. PARIETINA, L.* Stone walls and rocks, common; also on trees, &c. The rocks about St. Abb's Head, where exposed to the sea, are quite green with this, and states of *Placodium murorum*, of both of which it may be said in the language of Schaerer, "*Thalli color pro situ aprico vel umbroso intensior vel pallidior et magis viridis.*" The leprose state is *Lepraria viridis* according to Schaerer, who gives definitions of 14 varieties. *Enumeratio Lich. Europ.* p. 49—51.

24. *Gyrophora, Ach.*

1. *G. POLYPHYLLA, L.* On exposed mountain rocks, and stone walls. N. Summit of Cheviot and Hedgehope, and of Newton Tor; also on Fredon hill or Watch Law, Homilheugh, House of Crag, Henhole, the Bizzle, &c. B. "Near Abbey St. Bathans." *Rev. Thomas Brown.* Twinlaw Cairn, stone-walls near the site of St. David's Cairn, at Penmanshiel, and in Bowshiel dean; rocks at Dean's Castles, Oldcambus, Edin's Hold. Never in fruit.

2. *G. EROSA, Weber.* On mountain rocks and stones. N. "On Cheviot and Hedgehope." *Winch.* Near the summits of Cheviot and Hedgehope with spermogones and apothecia; also at the apex of Newton Tor. B. A single plant, bearing apothecia, on a stone wall, in the upper part of Bowshiel dean, a remarkably low habitat for this Alpine species.

3. *G. PROBOSCIDEA*, *Ach.* "On rocks near the summit of Hedgehope and on Cheviot," *Dr. Johnston*. I have repeatedly sought for this, without being able to find it. It is represented in *Dr. Johnston's Herbarium* by a single dwarf specimen without apothecia, which the Rev. W. A. Leighton, who examined it, refers to *Gyrophora deusta*, *α*. Turn. and Borr. Lich. Brit. This is *G. proboscidea* of the present arrangement. See also Mr. Leighton's Monograph of British Umbilicariæ, Ann. and Mag. N. Hist. 2nd ser. xviii. p. 289.

4. *G. CYLINDRICA*, *L.* On mountain rocks, &c. N. Frequent on Cheviot and Hedgehope; it begins on Cheviot along with the appearance of *Vaccinium Vitis-Idæa*; Henhole, Fredon hill, House of Crag, top of Newton Tor. B. Dikes in Bowshiel dean and near Penmanshiel.

These curious lichens are of world-wide distribution. *G. cylindrica* and *proboscidea*, along with *Lecidæa atroalba*, *L. geographica*, and *Cenomyce pyxidata* ascend to near the snow-line of the Mexican volcano of Orizaba. Ray Soc. Reports, 1845, p. 195.

5. *G. POLYRRHIZOS*, *L.* On mountain rocks and stones. N. "Hedgehope and Cheviot," *Winch*. Henhole, House of Crag, Fredon hill, Homilheugh, Great Heddon. B. Stones on the moor near Dowlaw, stone dikes at Penmanshiel and Harelawside.

25. *Pannaria, Delise.*

1. *P. RUBIGINOSA*, *Thunb.* *β. CÆRULEO-BADIA*, *Schleich.* B. On moss among shady rocks at the Black Crag, Pease dean; rare. Mr. Jerdon sent it from Mossburnford, Rox.

2. *B. BRUNNEA*, *Swartz.* On earth and among moss in shady deans, &c. D. On the sea-banks at Hudshead in the old Quarry. N. Heathpool linn, and by the side of Coldgate water above Langleyford. B. Sides of roads, and in deans in Penmanshiel Wood, Harelawside dean, below the Retreat, sea-banks at Siccar, and east of Redheugh. *Squamaria Hypnorum*, Bot. East. Borders, p. 268.

3. *P. HYPNORUM*, *Vahl.* Among moss on the banks of upland streams. N. "Cheviot," *Winch*. Common burn at Using Shank, where it unites with Broadstruther-burn, to form Care-burn. B. Near the head of Dowlaw dean.

26. *Amphiloma, Fries.*

1. *A. LANUGINOSA*, *Ach.* On moss among shady, and in the fissures and partly spreading over, damp rocks. N. Rocks above the Kettle or Wishing Well, Wooler, and on Whitelaw and Homilheugh; also by the side of the burn above Coldgate Mill, and among the high rocks to the west of the Care-burn, Ford Woodhouse hill.

27. *Squamaria, De Cand.*

1. *S. SAXICOLA*, *Pollich.* On exposed rocks and walls. N. "On rocks at Carham and Wark by the Tweed," *Winch*. Sea-coast at Bamborough, Spindlestone and Easington rocks. Plentiful round Wooler, Homilheugh, Fredon hill, Henhole, Routin Linn, &c. B. Dean at Oldcambus, near Dowlaw Moss, walls at Blackburn, Godscroft, Whitadder at the Retreat, East Gordon, &c.

Var. *ALBOMARGINATA*. Pale glaucous-green; the apothecia crowded, and sometimes deformed, their margins, and the outline of the scales of the thallus,

for the most part white; the disc of the apothecia concolorous with the thallus. This seems allied to Koerber's var. *compactum*. Syst. Lich. Germ. p. 115. B. On rocks on the Whitadder at the Retreat; wall near Siccar point.

28. *Placodium, De Cand.*

1. *P. MURORUM, Hoffm.* Old walls of houses, &c.; and common on rocks along all the sea-coast, N. and B.

2. *P. CALLOPISMUM, Ach.* B. On sandstone rocks at Greenheugh point.

3. *P. CANDICANS, Dicks.* N. On indurated limestone at Ratcheugh, with apothecia.

29. *Callophisma, De Notaris.*

1. *C. VITELLINUM, Ehrh.* On rocks, walls, and old pales, frequent.

2. *C. CERINUM, Hedw.* *β. CHLORINUM, Fw.* Rare. N. On rocks near the Heather houses. B. On stones in the burn, near the lower part of Dowlaw dean. *α.* N. On an ash tree on the Lill-burn.

3. *C. AURANTIACUM, Lightf.* *α. SALICINUM, Schrad.* N. On the trunk of old ash-trees at Spindleston-heugh, and Wooler Haugh-head. B. On the bark of an old ash tree at Piperton near Highchesters.

β. FLAVO-VIRESCENS, Hoffm. N. On sandstone, Whitsunbank hill.

γ. INALPINUM, Schleich. B. Not uncommon on stone-walls, and sometimes on gates; Penmanshiel; Whare-burn, &c. *Lecidea erythrella*, Hook. Brit. Fl. ii. p. 186.

4. *C. FERRUGINEUM, Huds.* On rocks, and sometimes on the bark of trees. D. On the bridge at Hudshed. N. Spindleston-heugh, foot of Horsden, Wooler, north base of Yeavering Bell, below Heathpool Linn, Routin Linn; on the bark of mountain ash above Harthope Linn, at the foot of Cheviot. B. Scattered along the Berwickshire coast; below "the Deil's Dander," Coldingham, Lumsden shore, Dowlaw dean, near St. Helen's Church, Ewe-lairs, and in various inland localities.

30. *Lecania, Massal.*

1. *L. ERYSIBE, Ach. α.* B. On a stone of claystone porphyry, and on mortar, at the base of a cattle fold, "Lady's Folly," Penmanshiel (765 feet high by the Ordnance Survey); also in the fissures of slaty rocks at the Swallow Craig, near Siccar-point. The species was determined by Mr. Mudd.

γ. ATOSPILA, Borr. "Rocks at Bamburgh, and Staples' islands, on the coast of Northumberland." Mr. William Robertson. (Hook. Brit. Fl. ii. p. 188.) "On basaltic rocks at Holy Island." Winch. I have twice examined the precincts of Bamborough Castle for this, without success. No one seems to know what *Lecanora spodophaca* is, for which the same localities are given. "To me," says Mr. Winch, "this appears to be only a variety of the preceding." Flora of Northumb. p. 87.

31. *Rinodina, Ach.*

1. *R. EXIGUA, Ach.* Small fragments have occurred on gate-posts at Penmanshiel, which Dr. Lindsay considered to be *R. sophodes*, I suppose of Leighton's Lich. Brit. Exs.; more common on stones, &c., about buildings. N. On some of the walls, and on rocks, Bamborough Castle. B. Tiles, and on walls of a cattle-fold, Penmanshiel; Cockburnspath Tower Castle. The thallus

acquires a green hue when moistened; "*c viridi cinerco-fuscus l. cinerco-albicans*," as Koerber properly says.

32. *Lecanora*, Ach.

1. *L. BADIA*, Pers. On stone walls and stones in upland places. N. Barmborough, Whitsunbank hill, Fredon hill, above Langleyford-Hope, north back of the apex of Hedgehope. B. Dikes in Bowshiel dean and at Penmanshiel; stones at Quixwood, and on Whare-burn and Monynut water, &c. *L. squamulosa*, Hook. B. F. ii. p. 187, in pt. In Bowshiel dean it has occurred as a parasite overrunning the crust of *Lecidea fumosa*, var. *grisella*.

γ. *PALLIDA*, Fr. "*Thallus depressus verrucoso-globosus cinereo-glaucus. Apotheciorum initia et spermogonia in thalli verrucis innato-punctiformia.*" Koerb. Syst. Lich. Germ. p. 138.

On greywacke rocks near St. Helen's Church, and much better marked in a specimen of *L. badia* from Barmouth, sent by the Rev. T. Salwey.

2. *L. ATRA*, Huds. On rocks, stones, and old trees, common. The white lichen so abundant at Routin Linn is a distorted state of this.

3. *L. SUBFUSCA*, L. On the bark of trees, and on stones, common. The wood varieties scarcely call for special notice. A small state with the margins of the apothecia nearly obliterated is according to Herb. Johnst. ! *Lecidea luteola*, Ber. Flor. ii. p. 89.—*L. vernalis*, Bot. East. Bord. p. 268. The saxicole varieties are; *ATRYNEA*, Ach., on stone walls and old gates, Penmanshiel; *CAMPESTRIS*, Schaer., on stone walls and rocks in burns, sometimes approaching in appearance to *L. atra*, and sometimes when submerged to *Aspicilia epulotica*; *LAINEA*, Ach. with its numerous spermogones on rocks on the sea-coast. This lichen is a cosmopolite. See Meyen's Geography of Plants, p. 92.

4. *L. ALBELLA*, Pers. δ. *CRENULATA*, Dicks. On stones and lime-coped walls, generally diffused. Limestone at Ratcheugh. "On limestone by the Tweed at Carham and Wark." Winch. The *Lecidea anthracina*, Ber. Flor. ii. p. 89, Mr. Mudd believes to be this, on examining a small fragment that I sent him. Mr. Winch expressed the same opinion. It occurred "on rocks at Hudshead, sparingly," whence I obtained an example corresponding with those in Herb. Johnst. ! The black substratum does not belong to the apothecia.

5. *L. GALACTINA*, Ach. B. On sandstone, sea-banks, Greenheugh; fine specimens from rocks in the burn, Dowlaw dean, mixed with *Callopiisma cerinum*.

6. *L. VARIA*, Ehrh. Old posts, gates, bark, &c., common.

γ. *AITEMA*, Ach. On paling and old gates, Penmanshiel. *Lecidea dubia*, T. & B. Hook. B. F. ii. p. 176.

δ. *OROSTHEA*, Sm. Trunk of an oak near Black Craig, Pease dean. *Lecidea expallens*, Borr. Hook. B. F. ii. p. 181.

ε. *SYMMICTA*, Ach. Common on the bark of larches and fir-trees; also on birches and the stems of heath.

7. *L. POLYTROPA*, Ehrh. On rocks and stones in upland localities, and on moors. N. Whitsunbank hill, Fredon hill, Homilheugh, Henhole, above Langleyford-Hope, Cheviot, &c. B. Penmanshiel, Coldingham Moor, Cockburnlaw, Greenknowe, &c.

β. ACRUSTACEA, *Schaer.* N. Cheviot, Routin Linn, &c. B. Bowshiel dean, moor at Dowlaw, &c.

γ. ALPIGENA, *Ach.* N. About the summits of Cheviot and Hedgehope.

δ. CONGLOBATA, *Fries.* N. On Easington rocks.

ε. INTRICATA, *Schrad.* On stone-walls and stones. N. Cheviot; Spindleston. B. Penmanshiel; Bowshiel dean, &c.; in the latter place parasitic on the thallus of *Rhizocarpon geographicum*.

8. L. SULPHUREA, *Hoffm.* On exposed rocks and stone-walls; not uncommon. It gives a green shade to the face of the rocks at Spindleston; in shady situations the thallus is almost yellow. A species that loves the blast.

9. L. GLAUCOMA, *Ach.* On hard rocks and stones in exposed upland places. N. Cheviot, Homilheugh, Spindleston, Bamborough, &c. B. Penmanshiel, Dowlaw dean, Oldcambus, &c.

β. SUBCARNEA, *Ach.* On sandstone at Cockenheugh and on the sea-cliffs near Scremerston, porphyry at Fredon hill, and trap at Budle.

We may have *L. Stenhammari* of Fries also, or at least a state of *L. glaucoma*, with a black hypothallus, (for in that species it is white,) which appears as a black rivulose line where patches meet on stones encrusted by this lichen; the whole stone being sometimes occupied by a map-like net work. In very exposed situations this hypothallus as well as the innate concave abortive Lecidea-like apothecia, and the numerous spermogones, are of a pale blue. This state is best to be seen in Dowlaw dean, and Edmonds dean, both liable to many a bitter gale. Fries, and the generality of writers on lichens, reckon *Isidium corallinum*, *L.*, as a variety of this species.

10. L. COARCTATA, *Ach.* α. ORNATA, *Sommf.* N. On stones and on the ground, on the Lill-burn. B. On the earth beneath the cope of stone-walls, near St. David's cairn, plentiful. This is a fine thing, very unlike the next variety, and more resembling *Psora atro-rufa* or *Lecidea decolorans*.

δ. ELACISTA, *Ach.* Sandstone, greywacke, and other rocks and stones in a crumbling state. Not uncommon on field-stones, N. and B.; best seen in winter and spring.

Fries spent several weeks in the study of this lichen, "*omnium maxime versiformis.*" *Fries*, Lichenog. Europ. Ref. p. 105.

11. L. PALLESCENS, *L.* α. PARELLA, *L.* Common on exposed stones, rocks, and stone-walls.

β. TUMIDULA, *Pers.* On old ash and oak trees; common.

γ. TURNERI, *Sm.* B. At the base of old oak and birch trees, Penmanshiel Wood.

If *Variolaria lactea* is the sorediated crust of this species as Koerber intimates, and as appears likely, it occurs on rocks on Care-burn, and an Harelawside dean.

12. L. TARTAREA, *L.* On mountain rocks, N. and B. Large sheets of it grow on some of the crags and rocky scaurs on Cheviot.

β. ARBOREA, *D. C.* A very pretty state with minute concave apothecia growing on stems of heath, on Coldingham moor, arranges better here than with *frigida*.

γ. FRIGIDA, *L.* Encrusting mosses, &c. N. Summits of Cheviot and Hedgehope. B. Coldingham moor.

33. *Hæmatomma, Massal.*

1. *H. VENTOSUM, L.* On mountain rocks. N. Hedgehope; Cheviot, at Woolhope Crag, Henhole, Dunsdale, &c; House of Crag, Fredon hill, Careburn, Homilheugh, top of Newton Tor, Ford Hill. B. "Cockburnlaw." *Dr. Johnston.* Edin's Hold; on stones on the banks of Watch water; on Twinlaw Cairns; wall at Penmanshiel; rocks called the Harly Darlies near Dowlaw Moss.

2. *H. COCCINEUM, Dicks.* On the shady side of rocks and stone-walls in upland places. N. Sides of the Henhole; rocks on Careburn; Homilheugh; Newton Tor; Kettle-well; Routin Linn; Spindlestone-heugh, &c. D. Rocks between Hudshead and Scremerston. B. Below the Retreat, Bowshiel dean, Penmanshiel, Dowlaw dean, dean at Oldcambus, &c. At times it gives the shady sides of rocks a delicate primrose tint. Sometimes the apothecia are stipitate on elevations of the crest as noticed by the Rev. T. Salwey, Ann. and Mag. Nat. Hist. xiii. p. 28.

34. *Acarospora, Massal.*

1. *A. CERVINA, Pers.* Vars. α . *SQUAMULOSA, Schrad.*, and δ . *SMARAGDULA, Ach.* On exposed walls and rocks, not uncommon. N. Hills round Wooler; Homilheugh; Whitsunbank Hill; Fredon Hill; top of Newton Tor, &c.; Spindlestone; Chester hill. B. Rocks at St. Helen's Church; head of Dowlaw dean; walls at Penmanshiel, Bowshiel dean, &c. Many of the specimens agree with the *Endocarpon rufo-virescens*, Taylor, sent by the Rev. T. Salwey from Wales.

γ . *PRIVIGNA, Ach.* B. On greywacke, along with var. *smaragdulum*, in the dean near St. Helen's Church. *Lecidca privigna*, Hook. B. F. ii. 184.

35. *Aspicilia, Massal.*

1. *A. EPULOTICA, Ach.* On partially inundated rocks or stones in streams; not common. N. "On rocks in Wooler water." *Winch.* Opposite Langleyford Hope; in the College at the entrance of Henhole; near a waterfall among the rocks on Careburn; Lill-burn above the road to Ilderton Dod. B. Rocks at the head of Harelawside dean; Dowlaw Moss burn; and near the pond at Lowrey's Knowes; Whitadder below the Retreat. *Urccolaria Acharii*, Hook. B. F. p. 172.

2. *A. CALCAREA, L.* β . *CONTORTA, Florke.* N. Veins of calcareous spar and carbonate of barytes, at Humbleton mill; very sparingly.

3. *A. GIBBOSA, Ach.* B. On greywacke in stone-walls at Penmanshiel. It is more minute than specimens on flint, and the verrucæ are more crowded, but I see no other distinction.

4. *A. CINEREA, L.* Hard rocks; not unfrequent, and widely diffused, N. and B. Where the rock in weathering, as in Dowlaw dean, cracks at the cleavage, white dendritic strings of the thallus find their way down the fissures.

γ . *CINEREO-RUFESCENS, Ach.* Rocks by water-sides. N. On the College at Henhole. B. Dowlaw dean; on Monynut water; on Whitadder above and below the Retreat with an ochraceous crust.

δ . *AQUATICA, Fries.* On porphyritic trap in the College at the entrance of Henhole; and on overflowed rocks on the Lill-burn.

36. *Urceolaria*, Ach.

1. *U. SCRUPOSA*, L. N. With the apothecia very minute and immersed, in the fissures of rocks at Bamborough Castle. B. In the usual form, on the edges of slate rocks, and running off on moss, on the south side of Bowshiel dean; also on rocks in a dean opposite Edmonds dean.

β. *BRYOPHILA*, Ach. Not unfrequent on mosses among stones in the lower part of Dowlaw dean; also as a cinereous incrustation on the thallus of *Cladonia pyxidata*, as noticed by Koerber, Syst. Lich. Germ. p. 169, the apothecia being inserted as parasites, in the foliage of the *Cladonia*. See also Fries, Lichenog. Eur. Ref. p. 192.

37. *Gyalecta*, Ach.

1. *G. CUPULARIS*, Ehrh. Moist shady rocks where water trickles over; scarce. N. Rocks at the head of the ravine that descends from Middleton rocks at Langlee; on calcareous tufa near the site of the Laidley Worm Trough, Spindleston. B. On greywacke in the North-Cleugh, Penmanshiel Wood, and in Dowlaw dean, where it also overruns moss. It is thus not limited to calcareous districts. The state on moss is the *G. fovicularis*, Ach., which Fries accounts a variety of *G. cupularis*. Dr. Lindsay examined my specimens microscopically, and had there been any essential difference, he would have noted it.

38. *Diploicia*, Massal.

1. *D. CANESCENS*, Dicks. On old walls, rocks, and occasionally trunks of trees; mostly near the sea-coast. N. Rocks and old tree-roots, Spindlestone-heugh; rocks near Bamborough Castle, where it fructifies, and on walls near the village; on porphyry, Humbleton Mill. D. Small fragments of it near Hudshead. B. Rocks below the walls of Berwick; on "Edgar's walls," Coldingham Church; greywacke rock called "Ailie M'Garnie," near Redheugh; walls of St. Helen's church, and at Greenheugh and Siccar.

39. *Toninia*, Massal.

1. *T. AROMATICA*, Turner. On earth in fissures of rocks, &c. D. On mortar of a bridge at Hudshead. N. Bamborough Castle, and Humbleton Mill. B. Along all the sea-coast of the parish of Cockburnspath, as at Greenheugh, Ewe lairs, Siccar point, &c.

40. *Lecothecium*, Trevis.

1. *L. NIGRUM*, Huds. Rare. B. On conglomerate and on a stone-wall at Greenheugh. N. On porphyry and calcareous spar, Humbleton dean, sparingly. *Collema nigrum*, Hooker B. F. ii. p. 207.

41. *Biatorina*, Massal.

1. *B. PINETI*, Schrad. About the roots of trees near the ground, in shady woods; not uncommon, but being very minute, requiring to be well looked for. N. On the scales of larch, and on the bark of alder on the Lill-burn. B. About the base of various trees, Bowshiel Wood, Retreat woods, Penmanshiel Wood, Brockholes dean.

2. *B. GRIFFITHII*, *Smith*. Not common. At the base, and about the roots of old oaks in Red Clues Cleugh, and on mountain ash, Penmanshiel Wood. N. On old oaks above Coldgate Mill.

3. *B. SPHÆROIDES*, *Dicks*. N. On a vein of calcareous spar in Humbleton dean. B. On mosses in North Cleugh, Penmanshiel Wood, among moist shady rocks, and on a rock beneath the Pease-bridge. A puzzling state of this occupies the shadiest portion of the face of the rock on the east side of Routin Linn. The thallus is dark green when moist, paler when dry, leprose, cracked into polygons; apothecia mostly scattered, about the middle size, sessile, thin, irregular shaped, margin flexuose, the disc flat, rarely in deformed convex rough tubercles, dull livid or purplish-brown, slightly primrose, the margin paler. I should have felt doubtful of this, but for finding a single globose apothecia of the usual form and hue. This is a form of the old *Lecidea vernalis*.

4. *B. ? HALOPHILA*, nov. sp. Thallus effuse, thin, somewhat scaly, the scales narrow elongate, scattered, or loosely gathered into a minutely rimulose crust; testaceo-cinereous or greyish-white; apothecia minute, not very numerous, scattered, plano-convex, never globose, flattened when moistened, finely rugulose, margined or immarginate, sometimes sitting on a scale, black, but more or less purple when moistened. Among shady greywacke rocks on the sea-coast at Swallow Craig, near Siccar point. The apothecia somewhat resemble those of *Lecidea fusco-rubens* of Nylander, (specimens of which I have from the Rev. T. Salwey,) in their external appearance, but these are smooth, better margined, and of a deeper purple when wet.

5. *B. SYNOTHEA*, *Ach*. B. On decayed pales near Penmanshiel, not common. This is identical with Mr. Mudd's typical example in Herb. J. G. Baker, Esq.!

6. *B. ? LITTORALIS*, nov. sp. Thallus effuse, thin, mixed with the hypothallus (?), tartareous, mouldering, rugulose, of a darker or lighter leaden grey; apothecia few and scattered, sessile on small elevations of the crust, minute, the disc concave or plane, margin thickish, black, shining; sporidia oblong-oval, bilocular. In the cavities of red-sandstone rocks beat by the sea at Greenheugh point, only a few specimens obtained, and those probably in a degenerate state. Of this plant Mr. Mudd, who examined a fragment says, "the internal structure of the apothecia is similar to those of *Lecania erysibe* γ. *aipospila*, Borr.; but the external aspect of the whole plant hardly corresponds with that of *aipospila*." Till better examples are procured I place it next to *B. chalybeia*, which it somewhat resembles externally.

7. *B. CHALYBEIA*, *Borr*. D. With a black crust on sea-side rocks near Hudshead, examined by Mr. Mudd. B. With a lead-coloured crust on tiles at Penmanshiel, compared with an example from Herb. Borrer! with which the Rev. T. Salwey kindly favoured me.

8. *B. GROSSA*, *Pers*. B. Trunks of trees, moist shady deans, not common. At the base of an oak in Witchy Cleugh, and on the bark of ashes, Blackburn-rigg Wood, and Red Clues Cleugh; on a hazel, Brockholes dean; and on an ash in a shady ravine, Bowshiel dean; and running off on mosses attached to the bark. *Lecidea premnea*, Hook. B. F. ii. p. 176 in pt.

42. *Bacidia*, *De Notaris*.

1. *B. ROSELLA*, *Pers.* *B.* On old roots of oak trees and bark of birch trees on the south side of Bowshiel dean; and on trunks of birch trees, and parasitic on a mass of *Hysterium*, Penmanshiel Wood; very rare.

2. *B. CARNEOLA*, *Ach.* *B.* On the scaly bark of old oaks, Red Clues Cleugh, and in Penmanshiel Wood near it; rare. The apothecia at their first origin appear as white warts split at the apex into a cross. *Schaerer*.

3. *B. LUTEOLA*, *Ach.* β . *FUSCELLA*, *Fries.* *N.* With var. *a.*, on trunks of ash and alder on the Lill-burn. *B.* On the trunk of a hawthorn, Dowlaw dean; and on alders below the Retreat, where the fruit is rare, but the barren thallus, and the spermogoniferous state (*Pyrenotheca vermicellifera*, Kunz.) is locally prevalent. Abundant in fruit on the decayed bark of a sawall in Kitchen Cleugh, Dec. 1862.

γ . *INUNDATA*, *Fries.* On moist stones and rocks in burns, and by watersides. *N.* In the Lill-burn and at Harthope Linn; and among the rocks on Care-burn. *B.* More common. Whare-burn, Whitadder at the Retreat; Blackburn-rigg dean; Bowshiel dean; Pease and Cockburnspath Tower deans, &c. When old the thallus becomes of a dirty griseous white, and the apothecia are blackened; in this state it might readily be taken for *Lecidea contigua*; but on removing the upper lamina of the apothecia, the interior is found to be pale yellow. In its young state it is of a fine emerald green.

43. *Scolicosporum*, *Massal.*

1. *S. VERMIFERUM*, *Nyl.* On rocks and stone-walls, not unfrequent. *N.* On porphyry near Humbleton Mill; above Langleyford Hope; on sandstone, Whitsunbank hill. *D.* On red sandstone a little beyond Hudshead. *B.* On decayed greywacke in walls at Penmanshiel, and in Bowshiel dean; Dowlaw dean; Pease dean; Swallow Craig; Lumsden shore.

44. *Raphiospora*, *Massal.*

1. *R. FLAVO-VIRESCENS*, *Dicks.* Very rare. *N.* A small portion in fruit on an earth-coped dike above Earle, by the foot-path that leads to Cheviot. A beautiful lichen.

45. *Bilimbia*, *De Notaris*.

1. *B. SPHEROIDES*, *Sommf.* Among mosses on the top of lime-coped walls, &c. Common, *N.* and *B.* Rarer on rocks: on greywacke, Ewieside hill; and red-sandstone near Greenheugh, and Swallow-Craig. *Lecidea viridescens*, Smith, Hook. B. F. ii. p. 180. The var. *MUSCORUM*, on mosses near Oldcambus, and in Dowlaw dean.

2. *B. ANOMALA*, *Ach.* Bark of trees. *B.* Birches, alders, plane-trees, and larches, Penmanshiel Wood; on birches, Bowshiel dean, Ewieside, and Dowlaw dean; on alders, and silver-fir, Retreat. *N.* On hazel, Routin Linn; birch on the Lill-burn. The spermogoniferous state appears to be *Pyrenotheca biformis*, Borr.

3. *B. MILLIARIA*, *Fries.* *a.* *TERRESTRIS*, *Fries.* *B.* On moory soil. On the moors near Penmanshiel, at Earnslaw or Piperton hill, near Dowlaw Moss; and about the sides of Monynut water. δ . *MELANA*, *Nyl.* On peat near Monynut.

46. *Lopadium, Koerber.*

1. *L. FUSCO-LUTEUM, Dicks.* "Upon Cheviot and Hedgehope." *Winch.* This I have repeatedly sought for without success. I have it from Ben Lawers from the Rev. H. Macmillan.

47. *Biatorella, De Notaris.*

1. *B. PRUINOSA, Sm.* On calcareous spar at Humbleton Mill; and on quartz veins in Chesterhill rocks. *B.* On lime-coped walls, Penmanshiel Wood, and on conglomerate and red sandstone near Greenheugh. Dr. Lindsay also found it along with *Rhizocarpon petræum*, in microscopically examining for me some of the numerous acrustaceous apothecia that spot the small fragments of stone that bestrew the roads in Penmanshiel Wood.

β. *REGULARIS, Kbr.* *B.* On red sandstone above Swallow Craig, near Siccar point. *Sarcogyne regularis, Koerber, Syst. L. G. p. 267.*

48. *Pyrrhospora, Koerber.*

1. *P. QUERNEA, Dicks.* Bark of old trees. *N.* On oak and alder on the Lill-burn; on oaks above Coldgate Mill, on the College, and at Routin Linn, but not in fruit. *B.* On oaks, birches, spruce-firs, and hollies, Penmanshiel Wood, Ewieside, Bowshiel dean, with apothecia.

49. *Lecidea, Ach.*

1. *L. RUPESTRIS, Scop.* On rocks chiefly those with calcareous constituents. *N.* Sandstone, Ratcheugh; on porphyry and calcareous spar, Humbleton Mill. *B.* On altered greywacke below the "Deil's Dander," Coldingham; on conglomerate near St. Helen's Church; on sandstone near Linhead Linn; and on greywacke, Black Craig, Pease dean.

γ. *VIRIDIFLAVESCENS, Wulf.* On sandstone near Cockburnspath Tower.

As Fries remarks; on the harder stones the apothecia are superficial, on the softer sub-immersed.

2. *L. CONGLOMERATA, Heyd.* *N.* On bark at the base of hazels in a wood on the Lill-burn, rare. This has nearly the usual appearance of the species. *B.* With the thallus the same, but the fruit very imperfect, and globular, sometimes pale red, while in some spots it is black. It runs off to an adjacent stone, and then is rather too like *Bilimbia sphaeroides*, but the apothecia are smaller and neater, and more regularly dispersed, and the thallus maintains its grey-green colour when dried. It does not appear to be the var. *dolosa* of *B. sphaeroides*, with which I have compared it.

3. *L. EFFUSA, Ach.* *B.* In shady woods on the trunks of old trees, generally about their bases, where it becomes mixed with *Biatorina pineti*. About the base of alders, birches, and larches, in the deans in Penmanshiel Wood; on alder, Brockholes dean. It is best seen in winter and spring. When fresh it is of a fine dark green.

4. *L. PRASINA, Fries.* On the timber of the stocks of old decayed trees in shady woods. *B.* Stumps of oak in Red Clues Cleugh, in Bowshiel dean, and at the Retreat; on decaying wood of various kinds, Penmanshiel Wood. *N.*

On old tree trunks at Spindleston-heugh. It is most abundant in spring, and almost disappears during the summer.

5. *L. VIRIDESCENS*, *Schrad.* β . *GELATINOSA*, *Flk.* N. Rare. On damp earth at the side of Coldgate burn, above Langleyford Hope, one example only; and again on soil on the Lill-burn, near where the rivulet from North Middleton Shepherd's House, joins it. B. Near the Black Craig, Pease dean.

6. *L. DECOLORANS*, *Hoffm.* Moors and earth on wall-tops in moorland situations, plentiful, N. and B.

γ . *VIRIDULA*, *Mudd.* N. On earth on a wall top behind the Sneer hill.

7. *L. ULIGINOSA*, *Schrad.* On damp, generally peaty soil, and sod coped dikes, in moorland localities. N. Cheviot and Hedgehope; Whitsunbank hill, Sneer hill, Ford hill, &c. B. Coldingham moor; Bowshiel dean, on wall-tops; on Laughing Law near Monynut, &c.

8. *L. RIVULOSA*, *Ach.* Rocks by water sides, and in shady deans, and also among exposed mountain rocks, common, N. and B. Very variable in its aspect. The rocks that wall our dark deep cleughs are often painted with its fuscous hues, variegated by the map-like lines of its hypothallus. A dark state of the plant in Dowlaw dean, shews a red fracture when the stone on which it grows is broken. It ascends to the summit of Cheviot where some remarkable forms occur.

β . *KOCHIANA*, *Hepp.* N. Langleyford Hope and Hedgehope. The thallus in these instances is of a white colour.

9. *L. ARCTICA*, *Sommf.* N. On mosses and peat among the boulders near the summits of Cheviot and Hedgehope, and confined to that elevation. This is a native of the highest Alps and of the Arctic regions.

10. *L. PARASEMA*, *Ach.* On the bark of trees, common; also mixed with *Lecanora varia* on paling and old gates; this form being *Lecidea scabrosa* of Leighton's Lich. Brit. Exs. The rarest var. is δ . *SAXICOLA*, *Leight.* This I have found, but not in a good state, on a shady rock in Harelawside dean.

11. *L. TURGIDULA*, *Fries.* B. Rare. On scales of the bark of the Scotch pine at the Retreat.

12. *L. CONIOPS*, *Wahlb.* On rocks, mostly in damp shady localities. N. Spindleston-heugh; on trap, House of Craig; on porphyry on the summit of Hedgehope; and on boulders imbedded in peaty soil, on the western side of the Care-burn. B. Occasionally on stone-walls at Penmanshiel. When the apothecia are moistened most of them become brown; and when young they are greenish grey, or livid, with a paler margin.

13. *L. GONIOPHILA*, *Flk.* N. On a piece of limestone in the wall of Whitsunbank hill. B. On the shady side of stone-walls at Penmanshiel.

β . *ACERVATA*, *Mudd.* B. On stone-walls at Penmanshiel, apparently more common than var. α . These exactly correspond with Mr. Mudd's specimens in Mr. Baker's Herbarium!

Some lichenists have considered this as a variety of *L. calcivora*, but I see no obvious resemblance. The var. might more easily be confounded with states of *L. protrusa*, amidst which it grows.

14. *L. ATRO-SANGUINEA*, *Hoffm.* B. On greywacke slate in Blackburn-rigg dean, and in the deans in Penmanshiel Wood, in shady situations. This closely

resembles Mr. Mudd's specimens; there is also an obvious likeness to *L. fusco-rubens* of Nylander; so that till the sporidia are examined, it must remain doubtful to which of the two, or any of them, it belongs. The apothecia are small, very numerous, mostly concave, black, but rufescent when moist; slightly pruinose, with the margin regular or flexuose; the crust is very thin, pale greenish grey when moistened. I found a small portion of it on clay, when the apothecia were still more hollow and pruinose. The apothecia of *fusco-rubens* are more regular, and the disc more frequently umbonate.

15. *L. TENEBROSA*, *Fw.* On mountain and exposed rocks; of not unfrequent occurrence. N. Summit of Hedgehope, Homilheugh, near the Kettle Well, Wooler, Top of Newton Tor, Spindleston-heugh. B. Bowshiel dean, dean at Oldcambus, Siccar point, foot of Dowlaw dean, rocks on the Whare-burn.

16. *L. INTUMESCENTS*, *Fw.* In small olive patches on the thallus of *Lecanora glaucoma*, which it excavates or destroys. N. On the top of Spindleston-heugh, behind the Cat's Crag; and on Cheviot above Langleyford Hope. B. Bowshiel dean on a wall top; near Siccar point; near the head of Dowlaw dean.

17. *L. AMBIGUA*, *Ach.* On exposed mountain rocks. N. On Cheviot, Hedgehope, and Fredon hill. B. On rocks on the Whare-burn, in Bowshiel and Dowlaw deans, Lumsden shore, Siccar point. Fries, (*Lich. Eur. Ref.* p. 303, 304,) gives an excellent description of this species under the name of *L. variegata*. In some places it appears to be equally common with *L. rivulosa*, from whose variety *Kochiana* it requires to be kept separate; for both species are bounded by rivulose hypothalline lines.

18. *L. MELANOPHŒA*, *Fries.* *L. Œderi*, Bord. Flor. ii. p. 88. On mountain stones and rocks. N. On porphyritic rocks nearly at the summit of Cheviot, and again at the base below Langleyford Hope; on blue whin boulders near the mouth of Henhole ravine; on greenstone on Spindleston-heugh and Chesterhill crags; rocks on Care-burn. B. "On loose stones of greywacke in the west of Berwickshire." *Dr. Johnston.* Rocks near Lowrey's Knowes, and in the lower part of Dowlaw dean; Bowshiel dean; below the Retreat, and at Edin's Hold; on Monynut water above Godscroft.

19. *L. PROTRUSA*, *Fries.* On exposed rocks and walls, principally on the sea-coast. N. On trap on the coast between Budle and Bamborough. D. On red sandstone at Hudshead. B. On greywacke along all the Berwickshire coast, on rocks exposed to the sea; very fine at Swallow Craig, Siccar point, and Lumsden shore. Inland with a brighter green crust, on walls at Penmanshiel, near Butterdean, and at Horsley.

20. *L. EXPANSA*, *Nyl.* On stones in moist situations, not common. N. Occurs as black blotches on stones in the Lill-burn or Three-stone burn, after it leaves the moors. B. On a sandstone boulder in a wet moor at Penmanshiel, and on greywacke in a shady dean on Ewieside.

21. *L. CRUSTULATA*, *Ach.* On exposed rocks, not common. N. On porphyry in Humbleton dean, above the Mill, and on trap at the head of the mill-lead, Coldgate Mill. D. On red sandstone with *Biatorina chalybeia* at Hudshead. B. On red sandstone at Greenheugh, and small portions on greywacke in a deep ravine in Ewieside.

22. *L. LAPICIDA*, *Fries.* On rocks, and stone-walls, not very abundant. N.

On rotten basalt at Bamborough; on sandstone at Whitsunbank hill, and on walls there; near South Middleton; Routin Linn. B. Occasionally on grey-wacke and sandstone in stone-walls, Penmanshiel; more frequent on red sandstone at Greenheugh, &c.

23. *L. CONTIGUA*, *Heffm.* *L. viridi-atra*, Hook. B. F. ii. 177, and also *L. confluens*, ib. ii. 175. On mountain and exposed rocks, and stone-walls, common. The vars., *PLATYCARPA*, *Ach.*; and *CONFLUENS*, *Web.* are common on the higher moors.

δ. *OCHROMELA*, *Ach.* N. On Cheviot and Hedgehope. B. On walls on the Dreedreigh or Warlaw bank. This appears to have been the *L. silacca* of Winch. The Rev. J. Harriman's Teesdale plant is very distinct from this,—*L. flavocarulescens*, *Ach.*

ε. *HYPOLEUCE*. This is a state in which the *L. contigua* spreads from the rock in diffuse greyish white patches over soil; apothecia few, large, at first concave, then plane, and finally considerably convex, the margin thick, slightly flexuose or circular, opaque black, pruinose when fresh; spermagonia as numerous black points. I sent an example to Mr. W. Mudd, who was not acquainted with it. The sporidia are oval, unilocular, and are "very large, filled with granular protoplasm." (*Mudd in litt.*) I found it in January among rocks on the banks south of Hudshead, where *L. contigua* is so prevalent, and again in the ravine above Lumsden shore, on soil in contact with *L. contigua* growing on the crumbling edges of slaty rocks.

24. *L. FUMOSA*, *Heffm.* *L. cecchumena*, Hook. B. F. ii. 175 in pt. *L. fusco-atra*, Fries, L. E. Ref. p. 316. On exposed mountain rocks and stones, not uncommon on the moors. N. "Cheviot and Hedgehope." *Winch.* Cheviot, Langleyford Hope, Henhole, Sner hill, Whitsunbank hill, moors on the Lillburn, Whitelaw, Spindlestone, and Chesterhill rocks. B. Coldingham Moor, Oldcambus dean, Dowlaw dean, the Lammermoors, &c.

γ. *GRISELLA*, *Flk.* B. On the moors at Penmanshiel, and on wall tops, Bowshiel dean.

50. *Schaerereria*, *Koerber.*

1. *S. LUGUBRIS*, *Sommf.* On exposed mountain rocks and stones, very sparingly. N. Small fragments on the rocks about Langleyford Hope; on trap on Fredon hill; on a sandstone boulder on the west side of Care-burn. B. On the cope-stones of a wall in Bowshiel dean; rocks on Monynut water. Dr. Lindsay has given a most laborious investigation of this species in the Journal of Microscopical Science, vol. v.

51. *Megalospora*, *Mey. and Fw.*

1. *M. SANGUINARIA*, *L.* D. "Murton crags, plentiful." *Dr. Johnston.* N. "Cheviot and Hedgehope." *Winch.* On greenstone rocks at Spindlestone-heugh and Chesterhill rocks; on trap on Fredon hill. On the bark of an old mountain ash, above Harthope Linn at the foot of Cheviot. "*In speciminibus perfectissimis stratum sanguineum etiam in thalli verrucis conspicuum.*" *Schaerer.* This is very evident in the lichen growing on bark.

52. *Buellia*, *De Notaris.*

1. *B. BADIO-ATRA*, *Flk.* On exposed mountain rocks, rare. N. On the

loose boulders before reaching the summit of Cheviot. B. One specimen, wall-top in Bowshiel dean.

2. B. CORACINA, *Hoffm.* On exposed rocks and stones, not common. B. On stones in Penmanshiel Moor, and near Dowlaw Moss; on wall-tops at Penmanshiel; on rocks in the dean at Oldcambus; rocks on Monynut water. This might be easily confounded with *Rhizocarpon petræum*; the apothecia are mostly innate.

3. B. ATRATA, *Smith.* N. On rocks on the Lill-burn, where it first enters the moors.

We have also among minute states of *Rhizocarpon petræum* on stone-walls, at Penmanshiel, a minute lichen, which in some of its appearances I cannot easily distinguish from *B. verruculosa*, Borr. But till I know it better, I cannot venture to place it in the list, lest it turn out to be an extremely dwarf condition of *Lecanora polytropa*. The fruit appears to be constantly black, even when moistened, but there is this against it, that it is sometimes convex.

4. B. DISCIFORMIS, *Fries.* This was comprehended under the old *Lecidea parasema*. On bark of trees, but not quite so common as that species, N. and B. On rocks on the Lill-burn.

5. B. MYRIOCARPA, *D. C.* N. On trap-rocks on the sea-coast at Bamborough. B. On greywacke at Lumsden shore.

β. PUNCTIFORMIS, *Hoffm.* *Lecidea pinicola*, Hook. B. F. ii. 176. B. Rare; on the bark of silver firs, and of alder at the side of the Whitadder, below the Retreat; and on an old fungus growing on an alder there.

6. B. SCABROSA, *Ach.* Koerber, Syst. Lich. Germ. p. 227. N. Parasitic on the thallus of *Bæomyces Byssoides* on a wall-top behind the Sneer-hill. B. On the same lichen on a road in Penmanshiel Wood; and with a thallus of its own on earth in the chinks of a wall, Bowshiel dean. *Lecidea scabrosa*, Hook. B. F. ii. p. 178. This species is not in Mr. Mudd's Manual of British Lichens.

53. *Diplotomma*, *Fw.*

1. D. ALBOATRUM, *Hoffm.* δ. EPIPOLIUM, *Ach.* On rocks, chiefly those containing lime, and on mortar, not common. N. On limestone at Ratcheugh, and on mortar at Bamborough Castle. B. Walls of Cockburnspath Tower; rocks below the "Deil's Dander," Coldingham; on red sandstone, Greenheugh, &c.

2. D. CALCAREUM, *Weis.* N. Rare; some imperfect specimens on limestone at Ratcheugh, and on calcareous spar at Humbleton Mill. *Lecidea speirea*, Hook. B. F. ii. p. 180.

54. *Rhizocarpon*, *Ramond.*

1. R. PETRÆUM, *Wulf.* *Lecidea atro-alba*, Hook. B. F. ii. 174, Johnst. Ber. Flor. p. 88? On rocks, and stone-walls, common. On stems of heather, Coldingham Moor.

γ. CONCENTRICUM, *Davies.* *Lecidea petræa*, Ber. Flor. ii. p. 87. On stones, common.

δ. CÆDERI, *Ach.* Rare. N. On sandstone, Whitsunbank hill. B. On a fragment of porphyry on Whare-burn, at the foot of Monynut hill; on the edges of decayed slate, ravine above Lumsden shore. The yellow tinge of the thallus is communicated by oxide of iron.

A very variable lichen. It occurs with the thallus almost black on the summit of Hedgehope. Pretty varieties with a radiating dendritic hypothallus are met with on the quartz of fragments of rolled gneiss, near the head of Dowlaw dean. These are the *Lichen dendriticus* of Dickson. Dr. P. Neill, in Edin. Encyclopædia mentions its selecting pure rock crystal. "It grows very elegantly on the smooth rocks of white quartz in the Highlands of Scotland." *Winch.* Several other lichens beside this have a dendritic irradiation of the hypothallus.

2. *R. GEOGRAPHICUM, L.* From the top of Cheviot down to the sea-coast of our rocky shores, common.

3. *SPHERICUM, Schaer.* N. Near Heathpool Linn. B. On the Whare-burn.

The last lichens collected by Humboldt on Chimborazo above the region of eternal snow were *Lecidea geographica* and *Gyrophora rugosa*, Ach. *Meyen's* Report on Vegetable Physiology, 1837, p. 140.

55. *Schismatomma, Fw. and Massal.*

1. *S. ABIETINUM, Ach.* In shady glens, on the roots and stems of old trees, not very common. N. On alders near Coldgate water, below Langlee; on alder below Langleyford Hope; on birch at Harthope Linn. B. On birch and oak on the south side of Bowshiel dean; on old hollies, Penmanshiel Wood. The spermogoniferous state, *Pyrenotheca leucocephala*, accompanies the other.

2. *MOUGEOTII, Pers.* "*Thallo verrucis in lepram deliquescentibus.*" Schaerer, Enum. Lich. Europ. p. 131. On moss in a very shady nook in Bowshiel dean opposite Edmond's dean. Fries identifies his *Biatora campestris* with this, but Koerber thinks Fries's plant is either a fungus or the representative of a new genus of lichens. Be this as it may, our plant is *S. abietinum* on moss.

56. *Dactylospora, Koerber.*

1. *D. INSPERSA, Tulasne.* Parasitic as small black specks on the thallus and apothecia of *Lecanora parella*, on red sandstone at Ewe-lairs; and on greywacke at Lumsden shore, on the Berwickshire coast.

57. *Abrothallus, De Notaris.*

1. *A. SMITHII, Tulasne.* B. Parasitic on small elevated aggregations of leaflets on old plants of *Parmelia saxatilis*, common in one place on the top of a stone-wall, Bowshiel dean; on the same Lichen on a rock, below the Retreat. N. On *Parmelia saxatilis*, on rocks at Spindleston-heugh, Chesterhill, and on the top of the Sneer-hill; on *P. omphalodes*, at the base of Homilheugh. On *Cetraria glauca* on the summit of the Sneer-hill occupying curious inflated hollow processes at the apex of the fronds. *C. glauca* thus affected is var. *bullata*, Schaer. Enum. p. 13. Tulasne met with it on *P. omphalodes* in France; Dr. Lindsay has not found it on this lichen, and doubts its occurrence there. Monograph of the Genus *Abrothallus*, p. 10. We have the varieties *ater* and *pulverulentus*.

2. *A. OXYSPORUS, Tulasne.* B. With the preceding in Bowshiel dean. N. On *Parmelia saxatilis* at Chesterhill; and on *Cetraria glauca*, Sneer-hill. My specimens of both were determined by Dr. Lindsay.

58. *Opegrapha*, *Humboldt.*

1. *O. SAXATILIS*, *D. C. D.* "On sandstone rocks at Hudshead, and on stone-walls in the vicinity, abundant." *Dr. Johnston.* N. Calcareous spar, Humbleton Mill; sandstone, Ratcheugh; Bamborough Castle. B. On sandstone at Greenheugh, and walls at Oldcambus; greywacke at Black Craig, Pease dean, in Dowlaw dean, and below the "Deil's Dander," Coldingham.

2. *O. VARIA*, *Pers.* *a. PULICARIS*, *Lightf.* Sub-var. *b. notha*, *Ach.* On the trunks and about the roots of old trees with thick barks. B. On the wood of old hollies, and bark of old sycamores and oaks, Penmanshiel Wood; bark of old ash trees at Piperton; and of old trees, Retreat. *c. tigrina*, *Ach.* On bark of sycamore, Penmanshiel Wood. *f. tridens*, *Ach.* N. On hawthorn, Homilheugh, and alders, Langleyford Hope.

β. DIAPHORA, *Ach.* N. On hazel on the Lill-burn. B. Roots of oak, Bowshiel dean; on mountain ash, Dowlaw and Brockholes deans.

γ. RIMALIS, *Fries.* N. Old ash trees near Heathpool. B. Beech and ash trees, Blackburn-rigg Wood.

3. *O. TURNERI*, *Leight.* B. On the bark of hazel, Penmanshiel Wood, Bowshiel and Brockholes deans, not common.

4. *O. ATRA*, *Pers.* Common on young ashes, oaks, hazels, &c., everywhere. The rarest form is *parallcla*, *Leight.* N. On ivy at Heathpool. B. On mountain ash and birch, Penmanshiel Wood, and Bowshiel dean.

5. *O. VULGATA*, *Ach.* Not uncommon on various trees in shady localities, N. and B. The sub-var. *stenocarpa*, *Ach.*, occurs with the common state. *Dr. Johnston's O. notha*, *Ber. Flor. ii. p. 100*, is from the Rev. W. A. Leighton's examination of the typical specimen, *O. vulgata*, var. *vulgata*, *Schaer.* See also Leighton's *British Graphideæ*, p. 23. The specimen is on ash bark, and consists of very minute, short, scattered apothecia.

β. DUBIA, *Leight.* On wood in clefts of the bark of oak and birch. Penmanshiel Wood and Bowshiel dean.

γ. SIDERELLA, *Ach.* On the trunks of smooth barked trees in shady woods, generally near the ground, frequent. N. On oak and hazel, Routin Linn; and on alder and ash at Heathpool. B. On holly, hazel, birch, aspen, oak, and ash, Penmanshiel Wood, and on similar trees in Bowshiel and Dowlaw deans, exhibiting several pretty sub-varieties. Some of my friends take this for *rufescens*, but its lirellæ are nearly all superficial, and not innate as in that form of *herpetica*.

6. *O. HERPETICA*, *Ach.* *γ. ELEGANS*, *Borr.* Very rare. B. On bark of ash in Bowshiel dean. This is the only instance of the true plant being found in the district.

59. *Graphis*, *Adanson.*

1. *G. ANGUINA*, *Mont.* *a. DIFFUSA*, *Leight.* On mountain ash, holly, hazel, beech, and oak, Penmanshiel Wood, &c. In a very diminutive state on bilberry, Bowshiel dean.

β. FLEXUOSA, *Leight.* On oak near Penmanshiel; hazel, Dowlaw dean; oak and elm, Blackburn-rigg Wood.

γ. RADIATA, *Leight.* On hazel, ash, oak, bird-cherry, and other trees, common.

δ. DIVARICATA, *Leight.* *Opegrapha scripta.* Johnst. Ber. Flor. ii., p. 100. On oak, hazel, alder and ash; common.

ε. PULVERULENTA, *Sm.* On the bark of oak, ash, hazel, and willow, Penmanshiel Wood, Bowshiel and Dowlaw dean, the Retreat, &c.

2. G. SCRIPTA, *L.* On the bark of various trees, frequent.

α. MINUTA, *Leight.* On the bark of young oaks, also on beech, ash, hazel and bird-cherry, Blackburn-rigg Wood, Brockholes dean, &c.

γ. VARIA, *Leight.* On oak, Kitchen Cleugh; on ash, Blackburn-rigg Wood.

δ. FLEXUOSA, *Leight.* N. On ash on the Lill-burn. B. On hazel, &c., Penmanshiel Wood; on ash, Blackburn-rigg Wood, &c.

ε. HORIZONTALIS, *Leight.* On birch, Penmanshiel Wood; on oak, Blackburn-rigg Wood.

ζ. DIVARICATA, *Leight.* On hazel, ash, and elm, common.

η. RADIATA, *Leight.* On ash and oak, Blackburn-rigg Wood, &c.

θ. TREMULANS, *Leight.* On hazel, oak, alder, ash, and beech, common.

λ. EUTYPA, *Ach.* On hazel, Kitchen Cleugh.

ν. DIFFRACTA, *Turn.*, sub-var. *radiata*, *Leight.* On oak and hazel, Kitchen Cleugh; on mountain ash and hazel, Brockholes dean; oak, Penmanshiel Wood; hazel, Bowshiel dean.

60. Aulacographa, *Leighton.*

1. A. ELEGANS, *Smith.* B. On the bark of old hollies, and once on an oak, Penmanshiel Wood.

61. Arthonia, *Ach.*

1. A. ASTROIDEA, *Ach.* Not unfrequent on the bark of young trees, preferring ashes and young oaks, N. and B.

β. SWARTZIANA, *Ach.* Rarer. N. On an ash on the Lill-burn. B. "On the ash, near the Retreat." *Dr. Johnston.* Ashes near Godscroft and Oldcambus.

γ. ANASTOMOSANS, *Ach.* On the smooth bark of alders, near Penmanshiel.

ε. FLAVESCENS. The thallus thin, diffuse, yellow, the apothecia minute purple-brown specks and lines. On the bark of holly, and at the base of the trunks of oaks and hazels in Penmanshiel Wood. This state is not *A. ilicina*, Taylor.

2. A. EPIPASTA, *Ach.* B. On the bark of young oaks, Penmanshiel Wood, Bowshiel dean; bark of hazel, Bowshiel dean; bark of hazel, Dowlaw dean; also on the twigs of birch and hawthorn.

3. A. PUNCTIFORMIS, *Ach.* The var. α. is rare. On young branches of hazel and oak, Penmanshiel Wood.

β. OLIVACEA, *Ach.* N. On hazel above Langleyford, and alder at Harthope Linn. B. On birch and hazel, Bowshiel dean; on hazels in the Pease dean, and in various deans in Penmanshiel Wood, Dowlaw dean, Retreat, &c.

4. A. ASPERSA, *Leight.* On bark at the roots of old oaks, in Red Clues Cleugh, and Witchy Cleugh, both in Penmanshiel Wood; rare. The specimens were identified by Mr. Mudd.

5. A. GREGARIA, *Weig.* α. CINNABARINUM, *T.* and *B.* On the bark of trees near the base of the trunks; not unfrequent. B. "On the hazel in the dean at the Pease-bridge." *Dr. Johnston.* On hazel and ash, Penmanshiel Wood, Bowshiel and Dowlaw deans, &c. f. DETRITUM, *T.* and *B.* N. On hazel

on the Lill-burn. B. Common. I have not sought for the sub-varieties; their distinctions are very trifling.

6. *A. VINOSA*, *Leight.* On old bark on the roots of old trees, and also on decaying wood, not common. N. On wood of decaying alder below Langleyford Hope. B. At the roots of oak in Reedy burn; and on decaying timber in Red Clues Cleugh.

7. *A. LURIDA*, *Ach.* B. On branches of hazel, Dowlaw dean, and Reedy burn; and occasionally on oaks, Penmanshiel Wood, and Bowshiel dean; rare.

8. *A. SPADICEA*, *Leight.* In shady woods at the base of the trunks of trees, almost close to the ground, rather frequent. On hazel above Langleyford and at Routin Linn; on larch and alder on the Lill-burn. B. On hazel and holly, Penmanshiel Wood and Pease dean; on scales of Scotch pine, Retreat; on hazel, Dowlaw dean.

9. *A. PARASEMOIDES*, *Nyl.* Parasitic on the apothecia and sometimes on the thallus of *Lecanora glaucoma*, not unfrequent. N. On Easington rocks, crags at Spindleston; and on Care-burn, Homilheugh or Homildon hill, &c. B. Walls at Penmanshiel, Bowshiel dean, Oldcambus dean, head of Dowlaw dean, below the Retreat.

10. *A. PUNCTELLA*, *Nyl.* N. Parasitic on the thallus of *Lecanora glaucoma*, in Humbleton dean, on rocks on the Care-burn, at the Kettle-well, on Homilheugh, above Langleyford Hope, and at Spindleston-heugh. B. On *Lecanora glaucoma* and *Isidium corallinum*, Bowshiel dean, frequent. From Mr. Mudd's Manual of British Lichens, p. 252, this appears to have been hitherto only found in Ireland on the thallus of *Diplotomma alboatrum*. Mr. M. examined my specimens, so that there is no doubt about the species.

62. *Calicium*, *Persoon.*

1. *C. CURTUM*, *T. and B.* On decayed old stumps and trunks of trees. N. Rotten alders on the Lill-burn; on oak, in a dean on the College, below Heathpool Linn. B. On decayed oak-stumps, Penmanshiel Wood, Reedy-burn, and at the Retreat, abundant in damp deans.

2. *C. QUERCINUM*, *Pers.* B. On decayed wood in the hollow of an old sallow, Bowshiel dean.

3. *C. HYPERELLUM*, *Ach.* On bark on the trunks and about the roots of old trees. N. On oaks above Coldgate Mill, and on the College, below Heathpool Linn; on alders in Langleyford vale, below Langlee, and near Langleyford Hope; and in different places on the Lill-burn. B. On oak in the Retreat wood, and the sides of the Whitadder at the base of Cockburnlaw; Langton wood; above the Pease bridge; Red Clues Cleugh; Hazeldean near Oldcambus; producing apothecia in all these places. The bright yellow portion of the crust is conspicuous on old oaks and sycamores, and constitutes the *Lepitaria flava*, Ber. Flor. ii. p. 103. *C. sphærocephalum*, found by the Rev. Thomas Brown, "on the bark of trees about Stichel House," Ber. Club's Proc. i. p. 32, from a specimen in Dr. Johnston's Herbarium, is *C. hyperellum*.

4. *C. TRACHELINUM*, *Ach.* *C. sphærocephalum*, Hook. B. F. ii. 141. On decayed timber of an old oak, above Coldgate Mill, and on rotten wood of alder at Langleyford Hope; rare. B. On an alder stump at the base of Cockburnlaw; and on decayed oak timber, Penmanshiel Wood; not common.

63. *Cyphelium*, *Ach.*

1. *C. TRICHIALE*, *Ach.* β . *STEMONEUM*, *Ach.* B. On decayed oak timber, Red Clues Cleugh; rare.

δ . *BRUNNEOLUM*, *Ach.* On the trunks of old and decayed trees. N. About the roots of old oaks in the glen below Routin Linn. B. On decayed oaks and willows, Bowshiel dean, and Red Clues Cleugh, not unfrequent.

2. *C. CHRYSOCEPHALUM*, *Turn.* B. On the scales of old Scotch pines, at the Retreat, with stipita but not capitula; rare. This agrees with one of Turner's own specimens!

64. *Coniocybe*, *Ach.*

1. *C. FURFURACEA*, *L.* On decayed bark of old trees near the ground, and overrunning mosses and decaying grasses among shady rocks, and on stones about the base of walls. N. On Care-burn, on Lill-burn, above Coldgate Mill, Kettlewell. B. Penmanshiel Wood, Bowshiel, Dowlaw, Harelawside, and Brockholes deans, Retreat, &c. In Penmanshiel Wood, I observed one of the stipita divide below the top, and carry a pair of capitula. In some localities this is reckoned uncommon, but it appears to have taken up its head-quarters with us. It is very common on stone-walls near their base, and it is owing to it, that the stones appear to be thickly dusted with flour of sulphur. In this situation it rarely fructifies, but I have found apothecia twice; once in Sisterpath dean, and again in Red Clues Cleugh. The hollow sides of woodland roads are also powdered with it, and the face of rock-cliffs in shady woods are dashed with broad masses of it.

65. *Endocarpon*, *Hedwig.*

1. *E. MINIATUM*, *L.* On rocks by the sides and in the channels of rapid streams, liable to be reached by the spray. N. At the mouth of Henhole ravine. B. Rocks in the burn in Harelawside dean, in the lower part of Dowlaw dean, and in the Whare-burn. Tho Berwickshire plants are mostly the var. *complicatum* Swartz.

2. *E. FLUVIATILE*, *Web.* On rocks and stones near the rapids or falls of mountain streams. N. "On the linn in Humbledon dean above Wooler, abundant." *Sir W. C. Trevelyan, Bart.* It is there still, at the foot of the largest fall. "In Wooler water." *Winch.* In Common-burn, near the foot of Fredon Hill. B. In the Whitadder above the Retreat. Koerber remarks:—"Hat im frischen, Zustande einen unangenehmen urinösen Geruch und einen widerlich bitterlichen Geschmack." (It has in its fresh condition a disagreeable uriny scent, and a nauseous bitterish flavour.)

3. *E. RUFESCENS*, *Ach.* D. On the mortar of a bridge at Hudshead. B. On the sea-banks between Cockburnspath Cove and Redheugh, abundant on clay in fissures of rocks, and on the ground in moist places.

4. *E. PUSILLUM*, *Hedw.* B. On clay on the banks of the North British Railway, north from Penmanshiel Tunnel. It is identical with specimens from Henfield, Sussex, sent by Mr. Unwin.

66. *Normandina*, *Nyl.*

1. *N. JUNGERMANNIÆ*, *Delise.* *Endocarpon pulchellum*, *Borr. Hook.* B. F.

ii., p. 158. B. On *Jungermannia dilatata*, Black Craig, Pease dean; and Dowlaw dean, below the linn; very rare. As to the nature of this plant, Koerber cannot form an opinion. Tulasne thought it a young state of *Placodium plumbeum*, and the supposed fruit a parasitic fungus.

2. N. VIRIDIS, *Ach.* N. On Sphagnum and other decaying moss plots, and on moist peaty soil, on the ascent of Cheviot, somewhat above where the Cloud-berry commences; also in the moss on the top of Hedgehope. I also gathered it in a boggy spot near Ford hill. There are some interesting remarks on this species by the Rev. Hugh Macmillan, in *Edin. Phil. Journal*, April 1856, p. 261, 262. I cannot, however, with Fries, regard it as a degenerate *Cladonia*; for in these localities the cup-mosses preserve their characteristic forms.

67. *Pertusaria*, *D. C.*

1. P. RUPESTRIS, *D. C.* β. AREOLATA, *Ach.* B. On the edges of slate rocks in Witchy Cleugh, and scattered about the base of stone-walls at Penmanshiel. The sorediated variety has a taste as bitter as *Variolaria faginea*.

2. P. SYNCARPA, *Mudd.* N. On sandstone on Whitsunbank hill, Wooler, with fertile verrucæ. This differs in no respects from Mr. Mudd's specimens!

γ. CORALLINA, *L.* On rocks and stone-walls in mountainous districts, common. N. and B. *Isidium corallinum*, Hook. B. F. ii., p. 231.

3. P. GLOBULIFERA, *Smith.* B. On beech in Penmanshiel Wood, fertile.

β. MULTIPUNCTATA, *Turn.* On the branches of old holly, Penmanshiel Wood, fertile.

γ. SOREDIATA, *Fries.* *Variolaria discoidea*, and *V. faginea*, Hook. B. F. ii. p. 169. On the bark of beech, birch, alder, oak, and other trees, very common. I follow Mr. Mudd in the arrangement of var. γ., for the same reason why he has adopted it. I find on beech along with *V. faginea*, a *Pertusaria* in perfect fruit, which agrees with *P. globulifera*; and again on holly another, *P. multipunctata*, on branches of holly, connected with an immense profusion of the sorediated form. But I also believe that *P. communis* has its sorediated state, as any one may see who examines it while growing.

4. P. COMMUNIS, *D. C.* Trunks of old trees, frequent.

5. P. PUSTULATA, *Ach.* *Porina leioplaca*, Johnst. Ber. Flor. ii., p. 103. On the smooth bark of the trunks of young oaks, ashes, &c. N. On oak at Spindleston, and on the College water. B. On oak in Penmanshiel Wood, hazel at Dowlaw dean, young ashes at Retreat, &c.

6. P. FALLAX, *Pers.* B. On the trunks of old oaks, Red Clues Cleugh; very rare.

68. *Thelotrema*, *Ach.*

1. T. LEPADINUM, *Ach.* On the trunks of old trees in shady deans in woods, not very common. N. On the bark of mountain ash above Harthope Linn, at the foot of Cheviot, and also below Langleyford Hope. B. On holly, hazel, birch, and oak, Penmanshiel Wood and Red Clues Cleugh; on oak, Pease dean; on birch and oak, Kitchen Cleugh; on oak, Blackburn-rigg Wood; on oak, Bowshiel dean, and on Ewieside.

69. *Petractis*, *Fries.*

1. P. EXANTHEMATICA, *Sm.* B. On red sandstone at Greenheugh point, and

on the sea-banks between St. Helen's Church and Siccac-point, in spring. It does not differ from the state on limestone. In Switzerland it also occurs on other than calcareous rocks; "*rarius ad arenaria et quartosa*," is Schaerer's notice, and Koerber makes a similar remark.

70. *Sphæromphale, Reichenbach.*

1. *S. UMBRINA, Wahlb.* On submerged indurated rocks in rivers, &c., in mountainous districts. N. On blue whin in the College water, where it leaves the Henhole ravine; on porphyry below a waterfall among the rocks on the west side of Care-burn; and also in the upper part of the Lill-burn. B. On indurated slate rocks on the Whitadder below Edin's Hold.

71. *Segestrella, Fries.*

1. *S. LECTISSIMA, Fries.* N. On the Cheviot syenite in the bed of the Coldgate water, above Langleyford Hope; I also traced it up to Harthope Linn, where it appears to occupy the place of the aquatic *Verrucariae*.

72. *Verrucaria, Wigg.*

1. *V. MAURA, Wahlb.* On rocks along all the sea-coast of Northumberland, North Durham, and Berwickshire, common. At Siccac point on slaty rocks washed by the sea the crust is of a smooth green greasy colour. Finely in fruit on greywacke at the west end of St. Abb's Head.

2. *V. AQUATILIS, Mudd.* On overflowed stones in streams. N. In the Lill-burn, among the rocks on the west side of Care-burn, and at Routin Linn. B. In the Whitadder at the Retreat, and in the burn at the Blackburn-rigg Wood.

3. *V. HYDRELA, Ach.* On overflowed stones in streams. B. In the Whitadder above the Retreat, and in the burn in Blackburn-rigg Wood. This agrees with specimens I have from Miss Atwood from the Water Winch near Tenby; but in hers the apex of the apothecia is better displayed.

4. *V. CHLOROTICA, Ach.* On rocks and stones in streams, overflowed with water. N. In the Lill-burn, among the rocks on Care-burn, Routin Linn. B. In Dowlaw burn, in burns in Penmanshiel Wood, Pease and Cockburnspath Tower burn, Whitadder, &c. A beautiful object in the water; being of a tender emerald green.

5. *V. SUBMERSA, Borr.* On partially inundated rocks and stones in running water. N. In the Lill-burn, and in a stream among the rocks on Care-burn. B. In the Whitadder above the Retreat, and in Dowlaw burn below the Linn. Koerber regards this as a variety of the preceding.

6. *V. LÆVATA, Ach.* On partially submerged rocks in streams. N. In the Lill-burn, and on Care-burn. B. On rocks on the Whitadder, and in Whareburn; also in Dowlaw dean, &c.

7. *V. POLYSTICTA, Borr.* B. A minute triangular fragment on conglomerate from the sea-banks at Greenheugh, agrees exactly with the plant as it grows in Sussex, as sent by the Rev. T. Salway.

8. *V. FUSCELLA, Turn.* B. On old mortar and stone-walls at Penmanshiel; not common.

9. *V. NIGRESCENS, Pers.* On rocks and stone-walls in open places. N. On limestone at Ratheugh, on calcareous spar at Humbleton Mill, and on calcareous

tufa at Spindleston. B. Common on rocks on the sea-banks; and in many of our deans, and by water sides.

β. *MACROSTOMA*, *Duf.* B. On a stone-wall near Siccar-point.

10. *V. VIRIDULA*, *Schrad.* On old mortar on walls. N. On lime-coped walls near Wooler, and at Spindleston. B. On walls at Greenheugh, at Penmanshiel, Retreat, &c.

A *Verrucaria*, like this, with a fine bright green tessellated crust, with the apothecia minute, innate, almost immersed, grows on calcareous spar below Humbleton Linn, and is perhaps a distinct species.

11. *V. OCHROSTOMA*, *Borr.* N. On sandstone in the walls of Bamborough Castle.

12. *V. RUPESTRIS*, *Schrad.* On rocks containing lime. N. On calcareous veins in porphyry, Humbleton dean; on limestone near Bamborough. D. Limestone near Hudshead. B. Veins of calcareous spar, Lumsden shore; below the "Deil's Dander," Coldingham; sandstone and conglomerate, Greenheugh.

β. *SUBALBICANS*, *Leight.* On mortar coping stone-walls, frequent, N. and B.

13. *V. MUTABILIS*, *Borr.* B. On stones in pasture fields at Penmanshiel, &c., common. Miss Atwood sends me an acrustaceous *Verrucaria*, under this name, from slate, Cardiganshire, with the apothecia larger, having a spreading base, the apex papillate. This form with us accompanies *trachona* in shady places. I find it among the rocks on Care-burn, and on slate in Penmanshiel and Blackburn-rigg Woods. It is perhaps the form *V. acrotella*, Smith.

14. *V. EPIGÆA*, *Ach.* B. "Dry barren banks, near Berwick, rare." *Dr. Johnston.* Sea banks between Redheugh and Dowlaw; on a wall-top, Bowshiel dean; road-sides in Penmanshiel Wood, and on the Railway banks near Cockburnspath Tower dean.

73. *Thelidium*, *Massal.*

1. *T. IMMERSUM*, *Leight.* N. On limestone at Ratcheugh; calcareous spar at Humbleton Mill; and calcareous tufa and mortar, at Spindleston. It forms deep holes in the rock on which it grows. There is an excellent description of this species in the Rev. W. A. Leighton's *British Angiocarpous Lichens*, p. 58.

2. *T. CONGIDEUM*, *Fries.* N. On veins of calcareous spar in porphyry in the dean above Humbleton Mill. B. On red sandstone above Swallow Craig on the sea-banks near Siccar point. Rare.

3. *T. GEMINATUM*, *Ach.* B. On the scales of the bark of old Scotch pines, Retreat; and about the roots of old oaks, Pease dean; rare.

4. *T. BIFORME*, *Borr.* On the trunks of trees, common, N. and B.

5. *T. EPIPOLYTROPUM*, *Mudd.* N. Parasitic on the thallus of *Lecanora polytropa*, on Cheviot. It is very like a small black parasite on the thallus and apothecia of *Lecanora subfusca*, not uncommon in Berwickshire; but *Dr. Lindsay* regards this as a fungus.

74. *Arthopyrenia*, *Massal.*

1. *A. MACULARIS*, *Wallr.* On stones in damp shady deans. N. Stones by the side of the Lill-burn. B. On stones in Brockholes dean.

β. *CODONOIDEA*, *Leight.* On stones among damp rocks. N. On porphyry

rocks near the sides of Heathpool Linn. B. On rocks near Oldcambus West Mains; and on slate at Ewieside.

γ. TRACHONA, *Tayl.* Among damp shady rocks. N. Rocks near the side of the Lill-burn; rocks on Care-burn, and the ravine above Langlee. B. Rocks in the deans in Penmanshiel Wood; Black Craig, Pease dean, &c.

δ. FUSIFORMIS, *Leight.* On the trunks of trees, near the ground, in shady moist woods. N. On ash on the Lill-burn, on hazel at Routin Linn. B. On beech, mountain ash, bird-cherry, ash, holly, and birch, Red Clues Cleugh, and Penmanshiel Wood; on hawthorn, Dowlaw dean; on ash, Retreat.

2. A. OLIVACEA, *Borr.* B. On the bark of hazel, Kitchencleugh near Penmanshiel; and on hazel and alder, Brockholes dean; rare.

3. A. RHYPONTA, *Ach.* B. On the smooth bark of the branches of young oaks, and also on hazels, Penmanshiel Wood and Bowshiel dean; on hazel, Dowlaw dean. I find that Mr. Mudd's specimens correspond with mine.

4. A. EPIDERMIDIS, *Ach.* a. FALLAX, *Nyl.* On the smooth bark of birch, often without any thallus. B. Penmanshiel Wood, &c.

β. ANALEPTA, *Ach.* Common on the smooth bark of oaks, birches, and sometimes also on hazels, and other trees. Sub-var. c. CORYLI, Hepp. N. On hazels, Langleyford Hope. B. Penmanshiel Wood, &c.

γ. LACTEA, *Ach.* On the bark of young sycamores, Penmanshiel Wood.

δ. CINEREA, *Pers.* B. On hollies, Penmanshiel Wood, and at the Retreat.

ε. PUNCTIFORMIS, *Ach.* On the bark of young oaks. N. Near Heathpool. B. Penmanshiel Wood.

ζ. CINEREO-PRUINOSA, *Schaer.* B. On the smooth bark of ash, Retreat. Sub-var. d. GALACTITES, D. C. On the smooth bark of alder, Penmanshiel Wood.

η. ATOMARIA, *Ach.* On the smooth bark of hazels, common.

5. A. OXYSPORA, *Nyl.* B. On the white epidermis of the birch, Penmanshiel Wood and Bowshiel dean.

79. *Microthelia*, *Koerber.*

1. M. GEMMIFERA, *Tayl.* N. Parasitic on the thallus of *Aspicilia epulotica* on blue whin in the College at the entrance to the Henhole; on the same lichen in Coldgate Water opposite Langleyford Hope; and I noticed it scattered in small fragments on rock specimens from Cheviot. The apothecia are very minute, and somewhat resemble spermogones. A *Microthelia* which appears to be this species, or *M. pygmæa*, occurs on the thallus of *Lecidea contigua* and other lichens on stone-walls in Bowshiel dean, and near Penmanshiel. It has not yet been submitted to the microscope.

2. M. VENTOSICOLA, *Mudd.* N. Parasitic in the form of black verrucæ on the crust of *Hamatomma ventosum* among the rocks on Care-burn. This production is mentioned by Schaerer as a forma "abortiva." Enum. p. 84, who refers to E. B. t. 906, fig. inf. Koerber considers it as a *Sphaeria*.

ADDENDA.

1. COLLEMA FURVUM, *Ach.* I have mistaken the large specimens of this for *Synechoblastus flaccidus*, and hence all the localities for it, unless it be Winch's, must rank here.

2. *LEPTOGIUM LACERUM*, Swartz. β . *PULVINATUM*, Hoffm. In the lower part of Dowlaw dean.

3. *POLYCHIDIUM MUSCICOLUM*, Swartz. In the lower part of Dowlaw dean.

4. *CLADONIA GRACILIS*, L. α . *CERVICORNIS*, Ach. On moors near Penmanshiel and Dowlaw, and near Quixwood; common. β . *VERTICILLATA*, Hoffm. Moors near Penmanshiel.

5. *CLADONIA SQUAMOSA*, Hoffm. α . *VENTRICOSA*, Fries. *Scyph. sparassus*, Hook. B. F. ii. p. 237. B. Among rocks in deans in Penmanshiel Wood; and under long heath on Penmanshiel Moor.

β . *MICROPHYLLA*, Schaer. B. *PROLIFERA*, Schaer. On Penmanshiel Moor.

γ . *DECORTICATA*, Flk. Under long heath in moist places on Penmanshiel Moor; common.

ϵ . *CÆSPITITIA*, Ach. B. On moss overgrowing the trunk of an old oak in Brockholes dean, Jan. 1863. It differs in no respects from a specimen gathered by the Rev. T. Salwey in the New Forest, Hampshire, except in having cylindrical podetia mixed with the squamules. This is one of the rarest of British lichens.

6. *CLADONIA COCCIFERA*, L. γ . *FLOERKEANA*, Fries. *Scyph. digitatus*, Hook. B. F. ii. p. 240. N. On the Sneer hill. B. On wall-tops and on the moor near Penmanshiel.

ϵ . *DIGITATA*, Hoffm. *Scyph. cornutus*, Hook. B. F. ii. 239. B. Among moss overgrowing an old stone-wall in Penmanshiel Wood, and in shady deans among rocks. The *digitata* of Dr. Johnston's Herbarium, and of the first part of this List, belongs to the var. *macilenta*, C. *filiformis*.

η . *MACILENTA*, Ehrh. A. *POLYDACTYLA*, Flk. B. On a wall-top in Bowshiel dean.

Our moors furnish nearly all the other varieties of the species of *Cladonia* recorded in Mudd's Manual; but it is needless to repeat them here.

7. *STEREOCAULON PASCHALE*, L. The variety already recorded is not *alpinum*, but a mountain form of var. α . Mr. Jerdon has sent from Jedburgh, the plant in its usual appearance, which I have not yet found in the district.

8. *RAMALINA SCOPULORUM*, Retz. On comparing some of the forms of *polymorpha* from the House of Crag, with the pendulous variety of Dr. Johnston, I find that they are the same. This variety then must be removed to *POLYMORPHA*. I find that Mr. Mudd's specimens bear me out in this view. We have also the caespitose smoked-like state of *polymorpha* on rocks in the moors above Lumsden. Fries reckons the var. *polymorpha* as a maritime one: "*ad rupes et saxa Europæ, præcipuæ maritimæ.*" Lich. Eur. Ref. p. 32.

9. *PELTIGERA CANINA*, L. ϵ . *PUSILLA*, Dill. The *spuria* of the "Berwick Flora" is a minute state of *canina*, different from Mr. Mudd's, which is a very elegant plant, more like *polydactyla*.

10. *PARMELIA INCURVA*, Pers. The Goldsleugh plant, and some of those from Whitsunbank Hill, belong to *P. Mougeotii*, Schaer.

11. *SQUAMARIA CIRCINATA*, Pers. A *Squamaria* that comes nearest this of any British species grows on sandstone on Whitsunbank Hill, but hitherto I have not obtained it with apothecia. The thallus is orbicular, adnate; closely rugulose verrucose areolate in the centre, and of a dark leaden grey; sub-

radiately divided at the circumference, gathered up into a ridge all round before the extreme edge, so that the margin is plaited like a frill, smoother and lighter grey towards the edge, but the edge itself is always russet brown. Younger states are flatter and not so rugose in the middle. The surface is more shining than in *circinata*, and is rougher, being covered all over with minute granules; and this has not the glaucous tint of that lichen; but it may be the var. β . MYRRHINA, Fries, L. E. R. p. 124: "*Thallo latiori rufescenti-cinereo (fusco-punctato) ambitu radioso-lobato, apotheciis fusciorufis, margine thallode flexuoso. Ad saxa duriora Alpium Helvetiæ.*"

12. LECANIA POLIOPHÆA, Wahlb. β . SPODOPHÆA, Wahlb. N. On re-examination of my specimens I find a small piece of this from rocks on the seashore to the north of Bamborough Castle.

13. RINODINA EXIGUA, Ach. The plant as it grows at Bamborough belongs to var. β . METABOLICA, Ach.

γ . HORIZA, Fw. Small fragments on the bark of a willow near Penmanshiel.

14. LECANORA ALBELLA, Pers. β . ANGULOSA, Ach. On the bark of willow and alder, near Penmanshiel, and on alder in the Pease dean.

γ . HAGENI, Ach. On old pales near Penmanshiel.

15. LECANORA OROSTHEA, Ach. "*Thallus tartareo-farinosus inæquabilis tenuissime rimulosus sulphureus l. pallide ochraceus, ('deliquescente ochroleucus'), prothallo albo fibrilloso. Apothecia primo innata disco luteolo-pallido mox protusa convexa livido-carnæa marginem thallodem prorsus excludentia difformia, Sporæ in ascis clavatis octonæ, parvulæ, oblongo-ellipsoideæ interdum incurvæ. monoblastæ, diam 3—6 plo longiores, hyalinæ.*" Koerber. *Lichen orostheus*, Ach. Prod. p. 38. *Parmelia orosthea*, Fries. L. E. R. p. 180. *Lecid. id.*, Schaer. Enum. p. 149. *Zeora id.* Koerb. Syst. L. G. p. 136.

On the shady face of steep rocks in dark deans. B. On slate at the Black Craig, Pease dean, producing fruit; also in Harelawside dean in a deliquescent state, with the fruit scarce and imperfect. The Rev. T. Salwey sent me a specimen agreeing with ours from "the perpendicular north face of a schistose rock near Barmouth," Merionethshire. This has hitherto been confounded with the var. *Orosthea* of *Lecanora varia*, but has no connection with that species whatever. It is nearly allied to *L. sulphurea*.

16. BIATORELLA RESINÆ, Fries. I cite this species to record a plant closely resembling it, but whether Lichen or Fungus, it is not easy to determine. It grows without any thallus as a parasite on the resin of larches in Penmanshiel Wood; very much resembles *B. Resinæ*, but is always a little larger, innate in the resin, the disc slightly concave when dry, plane when moistened, without the paler margin of *B. Resinæ*, yellowish-brown. I sent it to Dr. Lindsay in 1856, and his reply was, "seems to be a new British species. The nearest genus is *Sarcogyne*, Koerber, p. 266; the spores being innumerable and very minute."

17. LECIDEA ATRO-SANGUINEA. Having obtained better specimens of *Biatorella pruinosa*, β . *regularis*, I see that the slate lichen which I took for *L. atro-sanguinea* should rather rank with it. These are so similar that Schaerer ranks them both as varieties of one species, his *Lecidea immersa*.

18. CYPHELIUM CHRYSOCEPHALUM, Turn. I have found this fine species

with perfect fruit on decayed timber at the base of an oak, Red Clues Cleugh, Feb. 1863. There are sometimes two or three capitula on one stalk, and one of the capitula is proliferous from the centre, like a minute *Cladonia*.

19. *BILIMBIA MILLIARIA*, β . *SAXATILIS*, *Fries*. On stones in moist places on the moor near Penmanshiel.

IN drawing up this List of the Lichens of the Eastern Borders, I have followed generally the arrangement and nomenclature of Mr. Mudd's "Manual of British Lichens," Darlington, 1861; a useful work, and the only one that affords a comprehensive view of British species. I determined the greater number of the species by the aid of descriptions only; several, however, of the more critical species were examined under the microscope by Dr. Lindsay and Mr. Mudd; and as I proceeded with my labours, many typical examples reached me from the Rev. T. Salwey and others, to whom it is pleasant to return thanks. To determine Dr. Johnston's species I had the aid of his Herbarium, which had previously been revised by the Rev. W. A. Leighton. In particular I am obliged to Mr. Baker, of Thirsk, for his liberality in allowing me the use of his Herbarium, containing not only numerous specimens from the older Lichenologists, but also a large proportion of Mr. Mudd's types, labelled and arranged by that author himself. This did not reach me till this article was half printed, but it has enabled me to correct any mistakes into which I had fallen; and I can now safely say that by one means or another, nearly all the species that I have set down have been authenticated. The number of Lichens in Mr. Mudd's Manual is 495; but above 500 species are known as British. Dr. Johnston's list when corrected amounts to 77. In the present catalogue there are enumerated 244; being about half the British species. Mr. Winch, who had paid great attention to the Lichens in his "Flora of Northumberland and Durham," gives 281 as the sum for the two counties. Of these I find 81 to be either varieties, repetitions, or what would not now be considered as species. The present list comprises the whole of the species hitherto recorded for Northumberland, except the twelve following lichens:—*Collema fasciculare*, *Stereocaulon cercolinum*, *Sticta glomulifera*, *Umbilicaria pustulata*, *Lecidea æruginea*, *Opographa Chevallieri*, *Acolium stigonellum*, *Calicium subtile*, *Coniocybe pallida*, *Pertusaria velata*, *Verrucaria Dufourii* and *Pyrenula nitida*. Some of these and several others may yet be found in the Border district, when more attention is devoted to these plants than I am able to pay.

An account of an Ancient British Grave discovered at North Sunderland; by Rev. F. R. SIMPSON; with a description of the Calvarium of a Skeleton found therein; by T. BARNARD DAVIS, M.D., F.A.S., &c. (With Plate XIII.)

ON Friday 30th May, 1862, in making some alterations in the drains of the Blue Bell Inn, the workmen discovered an

ancient British grave, containing 3 urns, and a skeleton almost entire. The grave was on the crop of the sandstone, and perfectly dry, having an excellent natural drainage from its being so situated. It had nowhere more than a foot of soil over it when discovered; but had originally been about $3\frac{1}{2}$ or 4 feet below the surface, of which about 3 feet had, at some previous period been removed, to admit of a paved court being made to the south of the Inn. The grave is formed with 6 flagstones, (from the rocks on the sea shore to the north of the present harbour); its dimensions are, length 3 feet 2 inches, width 21 inches, and depth 20 inches. The urns were found at the N.E. corner, (the direction of the grave being very nearly due E. to W.,) and the body would appear to have been placed in it diagonally from the S.E. to N.W. corner—the skull being laid near to the S.E. corner, and the bones of the feet in the N.W. corner. The ribs and several of the vertebræ, with the bones of the arms and legs, occupied the intermediate space. The remains were those of a youthful female.

The large urn—*Plate XIII.*, *fig. 3*—appears to have been shaped on the wheel, and is elegant in form and considerably ornamented, the measurements being as follows—height $8\frac{1}{2}$ inches, diameter of lip $5\frac{1}{2}$ inches, of neck $4\frac{3}{4}$ inches, of body $6\frac{3}{4}$ inches, of base $2\frac{1}{2}$ inches.

The smaller urn—*Plate XIII.*, *fig. 4*—appears to have been shaped by the hand, is of much rougher material, ruder shaped, and simpler ornamentation; it is also more imperfectly baked. Its dimensions are—height 5 inches, diameter of lip $4\frac{1}{2}$, of neck $3\frac{7}{8}$, of body $4\frac{1}{4}$, and of base $2\frac{1}{2}$. Neither urn contained any cinerary remains. A third urn was broken to pieces before the men were aware of what they had discovered, and I have only succeeded after diligent and immediate search in recovering 3 fragments; but happily they are sufficient to determine its character and ornamentation. It is of finer material than the small one, and of superior ornamentation and shape, and also much better baked. The man who found the grave reported that the broken urn had been full of what he called black earth, but of this I could discover no traces, though I repeatedly and carefully turned over the small portion of soil which had fallen into the grave.

The following account of the skull, is from the pen of Dr. DAVIS, the author of the celebrated work, *Crania Britannica*, to whom it was sent:—

Calvarium of a Girl of the ancient British race, aged about 9 years. (Plate XIII., figures 1 and 2.)

This is a calvarium of great size and of good form, showing, by the state of the dentition, that the girl to whom it belonged was not more than 9 years of age, if quite so much. The permanent incisors and second premolars have not been cut.

The nasal bones are of good length, and the facial angle considerable. The forehead is upright and broad, and the whole calvarium is full and equable. The parietal protuberances are decidedly prominent, and the interparietal diameter great. It is a brachycephalic calvarium, manifesting great cerebral development at so early an age, if it have not been the subject of hydrocephalus, which is a little uncertain; and, although so imperfect, clearly indicating the cranial characters of the ancient British race. A rather extensive parieto-occipital flatness, I take to be the result of nursing in infancy on the primeval cradle-board.

The measurements, which, from the early age of the individual, although so considerable, do not afford the means of comparison with adult examples, are as follow :—

Circumference	21·2 inches.
Fronto-occipital arch	15·2 „
Length of Frontal	5·3 „
„ Parietals	4·9 „
„ Occipital	5·0 „
Greatest width, which is interparietal	6·0 „
Width of Frontal	4·9 „
„ Parietals	5·7 „
„ Occipital	4·5 „
Greatest height	5·5 „
Height of Frontal	4·9 „
„ Parietals	5·0 „
„ Occipital	4·0 „

Proportion of the length, represented by 100, to the width 80, and to the height 73·3 :—

Length.	Width.	Height.
100	80	73·3

The Antiquities of Yeving Bell and Three Stone Burn, among the Cheviots in Northumberland, with an account of Excavations made into Celtic Forts, Hut dwellings, Barrows and Stone Circle. By GEORGE TATE, F.G.S., Corresponding Member of the Society of Antiquaries in Scotland, &c.

FEW places in Northumberland have attracted more attention than Yeving Bell, one of the hills forming the northern termination of the porphyritic range of the Cheviots. Its old written history, beginning with the Venerable Bede, and its older unwritten history, as seen in its great stone walls, its hut circles, and mounds have given rise to much speculation among antiquaries. Every tourist too and pleasure-seeker, who rambles along the Borders, must climb to its summit, pore over its mysterious monuments and enjoy the extensive and rich view it commands.

There is a beauty in its shape—a cone truncated at the top, and separated by valleys and deep ravines, from the other hills with which it is connected. Though in altitude only about 1500 feet, yet rising steeply from the low lying plain of Millfield, its height appears greater. Cheviot is higher by more than 1000 feet, yet the view from Yeving is more varied and distinct, and comprehends more elements of beauty and interest, than that seen from the monarch of the range. The waters of the Glen, hallowed in imagination, because used to initiate the early Saxon converts into the Christian Church, almost wash the base of the hill, and wind their way through the richly cultured plain of Millfield to join the sluggish Till, whose serpentine course can be traced throughout this plain to the silver Tweed. The eye wanders over the Doddington range of hills on the north, and sees the rocky Farne and sacred Lindisfarne; while in other directions, in the far distance, we descry the three-peaked Eildon, Dunse law, and the Lammermuir hills. Towns, villages, castles, pele towers, churches, and battle fields give a human interest to the scene. On the flanks of Homildon hard by, Henry Lord Percy, in 1402, defeated 10,000 Scots under Lord Douglas; and at “Geteryne” the Scots were again overthrown in 1415 by Sir Robert Umfraville; and but two miles further west lies Flodden Field, on which in 1513, King James IV. of Scotland and the flower of his nobility perished.

The earliest notice of Yeving is given by Bede. After

narrating the conversion and baptism of Edwin king of Northumbria and of his people in the province of Deiri, he relates those things which happened in the province of Bernicia. "So great," says he, "was then the fervour of the faith as is reported, and the desire of the washing of salvation among the nation of Northumbrians, that Paulinus, at a certain time coming with the king and queen (Edward and Ethelberga,) to the royal country seat, which is called Adgefrin, stayed there with them thirty-six days, fully occupied in catechising and baptising; during which days from morning to night, he did nothing else but instruct the people resorting from all villages and places in Christ's saving Word; and when instructed, he washed them with the water of absolution in the river Glen, which is close by. This town under the following kings was abandoned, and another was built instead of it, at the place called Melmin, (now Millfield). These things happened in the province of the Bernicians."*

That Ad-gefrin and Yevering are names of the same place is sufficiently proved; the change which time has made in the old word is not greater than the transmutations of other names; the district in which both are placed is the same, for Saxon Bernicia is the present Northumberland; and the river Glen close by Ad-gefrin still retains its name. Mediæval records confirm the conclusion. In an old document respecting the Vicar of Newton in Glendale, Yevering is called "Gevera;" the rhyming chronicler Harding calls it "Geteryne," and in escheats made in 18 Henry VI., it is written "Yevern Villa belonging to Rad'us Grey Miles."

Of the Saxon Melmin there is now neither trace nor tradition; probably, however, the modern village stands on the site of the Saxon town, but the continued occupation, from the Saxon period down to the present time, may have entirely obliterated the relics of the Saxon era.† Ancient British remains have been found at Millfield; leaf shaped bronze swords were discovered there; and in the same locality a very large urn, 15 inches in height, ornamented with the common zig-zag pattern, was found standing on its mouth and covering burnt bones under a tumulus; this interesting relic is carefully preserved by Mr. Grey of Millfield Hill. In this neighbourhood one of the last struggles was made by the ancient British people for their independence; for accord-

* Bede's Eccles. Hist. Book i., chap. 14.

† At Ewart, not far from Yevering, a Saxon fibula was found, which is now in the possession of Sir Horace St. Paul, Bart.

ing to Nennius, Arthur, the favourite hero of romance, achieved one of his victories over the Saxons at the mouth of the Glein, which may readily be recognised as the river Glen in Northumberland. Tradition says, that a long quadrangular house at Old Yevering, now occupied by a shepherd, is Edwin's palace. The walls are five feet in thickness and built of porphyry blocks, but not in regular courses, and seemingly without lime; squared oak posts pass perpendicularly through the middle of the walls, and they supported the roof and helped too to give stability to these walls. Old doorways and windows with square headings are traceable; but besides rudeness of structure, there are no characters to carry back this building to the Saxon period. Possibly it may stand on or near the site of the old palace; it probably belongs to mediæval times, and may have been a rude pele for the protection of the village against the raids which rendered life and property insecure in the border land.

Our chief business, however, is with the early antiquities of Yevering. Through the liberality of His Grace the Duke of Northumberland, means have been supplied to explore them by excavations, and in this Memoir the result of the investigations will be given.* Too much must not be expected from each digging; we are groping our way through a dark period, when indeed there existed but few of the appliances of civilized life; the people who lived then had little to leave behind them, and therefore but few relics can be discovered. Sometimes indeed some object of peculiar significance may turn up; but it is more by the accumulation of facts made known by the extensive and systematic application of the pick-axe and spade, that we can hope to arrive at sound general views respecting the military and domestic arrangements, and the habits and character of pre-historic times.

All the antiquities examined are in the porphyritic hills, protruded through the sedimentary rocks lying at their base. Many conical peaks rise above this elevated mass, and though distinct and separated by high valleys, they

* The Club is indebted to F. Sitwell, Esq., Matthew Culley, Esq., and William Roddam, Esq., the owners, and to Mr. Borthwick, Mr. Elliott, and Mr. Gibson, the tenants of the estates examined, for their readiness in granting liberty in making excavations. We had also the benefit of Mr. Coulson's (of Corbridge,) experience in directing the workmen. Thanks are due to Sir Henry James for the Ordnance Survey; and I am especially indebted to my friend Mr. Wm. Wightman, of Wooler, for the accompanying map of the district examined.

yet roll into each other like the billows of an ocean. The tops of the higher hills are girt round by stone walls, as Yevering, Gledsleugh, Harehope, and Homildon—these I shall call *Forts*; *Camps* defended by rampiers are on lower eminences; *Fortlets*, or fortified houses, of less size than *Forts*, but with strong stone walls enclosing circular dwellings are scattered over the slopes of the hills and in the high valleys; *Hut circles*, isolated or in groups, are near to these *Fortlets*; and on high grounds or laws are placed *Barrows*, the sepulchres of the ancient population. Here however there is no regularly fortified town or *Oppidum*, like that at Greaves Ash.

FORT ON THE TOP OF YEVERING BELL.

The summit of Yevering Bell is encircled by a broken down wall, which encloses an area of twelve acres, of a somewhat oval form, the longest diameter being from east to west, and the circumference being a little more than 1000 yards. (*Plate XV. A.*) Additional defensive walls are on the east and west ends, naturally the weakest points, and they enclose crescent shaped areas (*fig. a*) between them and the main wall. The summit is comparatively flat for a mountainous region, yet the eastern end, where the porphyry rock protrudes through the soil, is about 20 feet higher than the general level. At this point there is an inner entrenchment, and within that again is a small enclosure set round with stones. (*Fig. b.*) Many circular foundations are traceable on the eastern portion of the area, but chiefly on the sloping southern side.

Antiquaries of a past generation threw by their speculations a mysterious sacredness over Yevering Bell. Hutcheson, in 1778, describes it as a temple consecrated to the adoration of the sun, and used in fire-worship. Another writer says it was certainly a Druidical temple, and that "the cairn with a large stone on the summit is evidently a Druid altar, where religious rites were performed in the fire-worship; and the circles of ruins on the sides of the hill have been supposed to be Academics of the Druids." For these fancies, the chief support has been derived from the name, which has been transposed into Bel-ad-gebrin—Bel being regarded as the same as Baal, a Babylonish title of the sun, and the whole as meaning "Mount of the Sun." But these etymologies are forced and exceedingly improbable; Baal was a god unknown to the British people; and there is moreover an obvious explanation of the word *Bell*, from the shape of the

hill which is conical, and spreading out at the base like a *bell*; and this name seems to be of modern origin. Other hills in the neighbourhood have the same designation, as Hebron Bell and Heathpool Bell, neither of which affords any trace of a Druidical temple. Of the old name *Ad-gefrin*, I can offer no probable explanation.*

To help to clear up the mystery of *Yevering Bell*, the great wall was examined by excavations in three places, the gateways were cut into, the inner Fortlet and ditch were explored, and several of the scattered circles were opened out.

Walls. The stones which formed the great wall are now spread over a width of more than 20 feet, but the excavations shewed that it originally was from 10 to 12 feet in breadth. It had been built of porphyry blocks, without lime, as in other ancient British walls; but the structure was much ruder than that of the Greaves Ash Oppidum. Large blocks were used for the foundation, especially in its outer face, and smaller stones were piled upward, not perpendicularly, but with a slope on both sides, so as to form a pyramidal wall. As the ground generally rises towards the interior of the Fort, the wall is for a few feet built against the hill-side. A "dry stone wall" of a similar kind of the present period, 3 feet broad at the base, and 15 inches at the top, and 5 feet high, forms a good boundary fence; we may therefore infer, that the great wall around *Yevering*, notwithstanding its rude structure, would present to the enemy a massive defence not less than 7 or 8 feet in height.

While looking over the wild and singular scene on the top of the hill, a frame of mind is generated with a tendency to exaggerate; and hence astonishment has been expressed at the quantity of stones "borne by human hands to erect this wall;" but there is really nothing wonderful in this; for before the wall-builders began their work, the summit and sides of the hill would be covered by stones, quarried by nature and adapted for the purpose; because the porphyry rock is naturally fissured and jointed, and wherever a cliff is exposed small blocks tumble down and accumulate in vast numbers.

Gateways. There are four gateways or entrances; one on the west; another 9 feet wide on the east; a third on the north, also 9 feet wide, leading down to an oak forest, which

* "In Celtic *cyfrin* signifies secret, and the name *Yevering* appears to have been substituted from its resemblance to the old word." Sir Gardner Wilkinson, *British remains at Dartmoor*, p. 11.

clothes part of the northern side of the hill ; but the principal entrance is on the south, which is 12 feet in width, and which has a guard-house on its west side of an oval shape 9 feet by 6 feet. This guard-house was cleared, and on its floor were found charred wood, and the broken under stone of a quern, which is of a rude form, 12 inches in diameter, and made of a reddish brown sandstone such as occurs on the Doddington hills. Near to this gateway, in a cutting outside of the wall, a small flint was discovered, at the depth of 3 feet; it is 1 inch long, with a sharp cutting edge, and appears to have been a small knife. (*Plate XVI. fig. 1.*)

Inner Fortlet. To ascertain the character of the Entrenchment or Fortlet (*Plate XV. fig. a*) within the great Fort, and near to its eastern end was an object of considerable interest, as it was here, according to popular fancies, that Druidical rites were performed. Being the highest part of the hill, and jutting above the general level, it is naturally a strong position ; but it has been fortified by a deep ditch and low rampier, encircling a space 170 feet in circumference. The ditch was examined by diggings, and found to have been originally 5 feet deep, 5 feet wide at the top, and 2 feet wide at the bottom. In most places it has been cut out of the rock ; and the stones and earth excavated, had been heaped up on the outer side of the ditch, to form a low defensive rampier about one foot in height. At the bottom of the ditch charred wood was found ; but not in sufficient quantity or size to prove that there had been a stockade around the entrenchment. The ditch is not carried entirely round, but on the east side the rock is left, and forms a causeway 9 feet wide, giving access into the Fortlet. Some old accounts state, that a paved road 3 paces broad and 30 feet long, led from the outer wall into this Fortlet ; but no such pavement exists ; the cracked and jointed rock, having the appearance of an artificial pavement, has led to the misstatement.

Within this Fortlet, at its very highest point, is a small oval enclosure, 13 feet in diameter from north to south, and 10 feet from east to west ; and here, according to imaginative antiquaries, was the Druidical Altar ; and here were seen the stones, reduced to a "calx" by the fire, which consumed the victims. This enclosure, which was filled with small stones and earth, was entirely cleared ; but no altars—no cromlechs were seen. At the depth of 15 inches, the rock *in situ* was reached, which formed a rough floor ; scattered over it, charred wood was found, and in its centre a copper relic,

which resembles a thick pin with a flat perforated head. (*Plate XVI. fig. 2.*) It is $1\frac{3}{8}$ inches long, and is coated over with green carbonate of copper; it is very probably the tongue of a fibula or similar ornament. This enclosure has been excavated out of the rock, and is indeed a kind of pit dwelling, which may have been covered with a roof; but if not, the shelter afforded by the excavation would not be unimportant in this high region, exposed to tempests of wind, rain, and snow.

Hut circles. Some of the hut circles were explored by trenches cut through them, and others were entirely cleared; in all, evidences of occupation were discernible. Their usual size is from 24 feet to 30 feet in diameter; but one of them is only 18 feet.

One circle 30 feet in diameter, had an eastern entrance and was flagged with flat porphyry stones in the same manner as the huts at the Greaves Ash Oppidum; another of the same size was found rudely paved with small stones; and in another near to the Fortlet, charred wood was found on the floor at the depth of 4 feet.

The hut (*Plate XV. fig. c*) which is 27 feet in diameter yielded more distinctive relics; broken pottery along with charred wood was found on the rude floor at the depth of 15 inches. Excepting one fragment, which is made of fine clay and is of a bright red colour but soft and decomposing, all the pottery is of the coarsest kind, rudely fashioned by the hand, as much as half an inch in thickness, and black throughout, though having a thin film of reddish brown on the exterior. One fragment is the upper part of a jar-shaped vessel and has a groove running round a little below the rim. (*Plate XVI. fig. 3.*) This pottery, as well as that from another of these hut circles, is similar to the pottery obtained at Greaves Ash Oppidum, and I doubt not is Celtic or Ancient British.

In circle (*Plate XV. fig. a*) which is 26 feet in diameter, fragments of the same kind of coarse pottery were found at the depth of 18 inches, and along with them portions of two oak rings or armlets; one of them is of a dark brown colour and still retains a bright polish on its surface; it is flat on the inner surface and rounded on the upper; and it had been 10 inches in circumference. (*Plate XVI. fig. 4.*) The other ring (*fig. 5*) is smaller and more slender, being only $7\frac{1}{2}$ inches in circumference, of a pale brown colour and destitute of polish. The upper stone of a quern was also discovered here; it is different in form and rock from any previously

seen in the course of the diggings; it is flat and little more than one inch in thickness; its diameter was 18 inches, and it is made of a hard crystalline syenite, which I cannot identify with rocks belonging to the district.

Circle (*Plate XV. fig. e*) which is 27 feet in circumference yielded at the depth of one foot the following interesting relics: A portion of another oak ring, very dark and brightly polished, and in excellent preservation; it is flat on the under surface, but the sides of the upper surface slope to a sharp keel; its circumference had been 11 inches, (*Plate XVI. fig. 6*); a round jasper ball, artificially rounded, 3 inches in circumference and resembling a large marble; charred wood; and three flints, not having artistic shape nor even appearing to be portions of broken instruments; they seem indeed to have been the rough material out of which weapons and instruments were manufactured, leading to the inference, that the old population about Yevering fashioned their own weapons and instruments out of the flints which had been brought from a distance.

The oak rings or armlets are an interesting addition to our early relics. Their association with coarse pottery and flints shews that they belong to an early period. A similar ring was found at Logie, Forfarshire, under a barrow along with four human skeletons.*

Most of these hut circles in Yevering were a kind of pit dwellings; for they were cut out of the hill side, so that excepting towards the south and the east they were sunk a few feet below the surface.

FORTIFIED DWELLINGS AND HUT CIRCLES EASTWARD OF YEVERING BELL.

All around the Bell, where the inclination is not very steep and craggy, fortlets and hut circles are traceable; but there are more on the eastern side, where the slope is gentle, and in the high valley which lies between the Bell and White-law; and here several excavations were made.

Fortified dwelling. On the descent of the hill, about 500 yards eastward of the top of the Bell, and near to an ancient British road or trackway, there is a pretty large fortified dwelling, of an oval shape, 183 feet in diameter from north to south, and 120 feet from east to west, and containing within it hut circles and enclosures. (*Plate XV. fig. H.*) The outer wall is strong, and there are supplementary

* Wilson's *Prehis. Annals*, p. 299.

defences on the north and east sides. No diggings were made into this.

Fortified dwelling. Descending the hill eastward we meet with one of the most remarkable of these Fortlets. (*Plate XV. fig. B.*) It is nearly circular, being 50 feet in diameter from north to south, and 53 feet 8 inches from east to west; and though small, it has been constructed with remarkable care. The outer stone wall is 7 feet in thickness; and at the side of the gateway it is increased to 12 feet. The outer face was cleared, and masonry was exposed similar to the best at Greaves Ash Oppidum, the wall being built with large upright stones, some of them from 2 to 3 feet in height, and with smaller stones carefully set between them.

The gateway is on the east, and is divided into two entrances by an upright stone—a rude unhewn pillar, 2 feet 8 inches high, the openings at the side being 3 feet 3 inches and 2 feet 7 inches wide. A guard-house on the north side 6 feet long by 2 feet 9 inches wide protected this gateway, being formed partly within the very thick wall; on its floor, flagged with flat porphyry slabs, burnt wood was scattered; and near to it, on the outside of the wall, a broken flint instrument was found at the depth of 2 feet; it has a cutting edge, is one inch long, and but rudely fashioned; it seems to have been a javelin head. (*Plate XVI. fig. 7.*)

There are several hut circles within this Fortlet; one opposite the gateway, 16 feet in diameter was cleared, and a roughly flagged floor was exposed. Another chamber, of a somewhat angular shape, connected with the west wall, was also cleared; it is 9 feet 4 inches by 7 feet 4 inches, and its floor shewed smoother and more regular flagging, than any that has yet been seen in the district. This chamber is at a higher level by 3 feet than the other huts, and there is a sloping pavement leading to it from the lower part of the Fortlet. Notwithstanding the superior construction of this Fortlet, no relics were found excepting the flint and charred wood.

No distinct evidence has yet been discovered in Northumberland of stone-roofed huts, nor any trace of step-over work; yet I think it is not improbable, but that such small chambers as this guard-house, built against or within the great walls, were vaulted with stone, for usually they are filled up with considerable quantities of stones, which may be the debris of fallen-in roofs.

Fortified Dwelling. (*Plate XV.C.*) Ascending the hill in a

north-east direction from Fortlet B, and crossing the ancient British road, another fortified dwelling is reached of a larger size and ruder structure. The shape approaches to a square with the corners rounded, and it measures internally 93 feet by 80 feet; the walls formed of large stones, are from 4 feet to 5 feet in thickness; and the entrance, which is 6 feet wide, is on the north side near to the east wall. Within this Fortlet are several foundations of a rounded form; one of an oval shape, 18 feet by 12 feet in diameter, was cleared, and at the depth of 4 feet a well-flagged floor was exposed. Two upright stones, 3 feet 3 inches in height, stand on the west side of this flagging. Relics were discovered at two different levels; at the lowest level, on the flagged floor, there were two hones or sharpening stones, a small perforated stone, a flint, and charred wood. One of the hones is a hard, very fine grained, almost compact trap rock, and the other is softer and a kind of greywacke; though neither occurs *in situ* in the district, they may have been obtained from the superficial drift deposits. The flint is but a fragment, but like all the other flint objects found in the district, it has been brought from a distance. The perforated stone relic is of mica schist which does not occur in Northumberland nor on the Borders; it is regularly squared and smooth, 3 inches in length, and when perfect it had been 1 inch broad; the perforation is through the middle near to one end. (*Plate XVI. fig. 8.*) Professor Simpson informed me, that similar stones had been found, belonging to an early period, in Scotland, near to fishing stations, and that they were supposed to have been used as weights to sink nets or fishing lines.

At a higher level by $2\frac{1}{2}$ feet, or 18 inches from the surface, there were relics of a different character and age. Many fragments of a peculiar pottery were found along with a piece of sheet lead. This pottery is finer, harder and better burnt than that found on the top of the Bell, and indeed than any that is usually regarded as Celtic or Ancient British. Some fragments shew, that some of the vessels had well formed rounded projecting rims, and had also been ornamented by parallel incised lines or grooves—*Plate XVI. figs. 9 and 10*—yet it is coarse as compared with even the rudest modern pottery, for small pebbles have not been taken out of the clay; much of it is black or dark grey throughout, excepting a thin film of reddish brown on the outside, shewing that either vegetable matter had been mixed with the clay, or that the vessel had been burnt in a “smother kiln.”

But the most peculiar character of this pottery is, that it is covered with a yellow glaze.

Two other hut circles in this Fortlet were explored ; on the flagged floor of one, at the depth of 3 feet, charred wood was found ; and in the other, which is 8 feet in diameter, the upper stone of a quern was lying on its floor. This quern is of the common conical shape, 13 inches in diameter and measuring 6 inches in its thickest part ; it is made of a reddish porphyry with large felspar crystals, such as occur in the district—a kind usually selected for these primitive hand-mills.

The square-like shape of this fortified dwelling might lead to the supposition, that it is of late construction. Doubtless the circle is the prevailing form of Forts and dwellings of early Celtic times ; but this is sometimes departed from, and camps and Forts are frequently modified to suit the nature of the ground. Even this fortified dwelling, however, has its corners rounded, while its other characters ally it with early Celtic buildings ; for it has the same description of thick walls without lime, the same rudely flagged floors, and the same kind of hut circles within. The flint associated with the stone relic indicates an early age, when the Fortlet was originally erected and occupied. After a lapse of time another generation followed more advanced in art, for they used a higher class of pottery, and this difference of time must have been considerable, since debris of 30 inches in depth had accumulated between the two periods of occupation.

Fortified dwelling. (Plate XV. K.) A little higher up the hill, 200 yards southward of Fortlet B, there is another smaller fortified dwelling, with an eastern entrance ; and which, though only 30 feet in diameter, has a wall $3\frac{1}{2}$ feet thick defending several small, rudely-formed, unflagged hut circles within. Diggings into these yielded, at a depth of 1 foot, fragments of the same glazed pottery as that already described.

Hut circles in Swint Law. The valley in which the Fortlets already noticed are placed is bounded southward by high ground, which is called Swint law ; and on this and in the high valley between White law and Gleedsleugh, numbers of hut circles could be traced a few years ago, some in groups, others isolated, and many of them with their walls standing above the ground ; but when the boundary fence between the Akeld and Yevering estates was built in 1859, all the camps and dwellings near this boundary were pillaged of their stones.

On Swint law (*Plate XV. fig. L*) eight of these hut circles were explored. They are of various sizes, from 8 feet to 25 feet in diameter, and are either circular or oval in shape. One of them, 23 feet by 20 feet in diameter, with an eastern entrance, is divided by a cross wall into two compartments; and in the south chamber, at the depth of 1 foot, a fragment of a glass armlet was found. (*Plate XVI. fig. 11.*)

This fragment is only $1\frac{3}{8}$ inch long, but when perfect it had been 8 inches in circumference. As in the oak rings, it is flat on the inner surface and rounded on the upper. It is formed of glass of various colours and of enamel very artistically fused into each other. A pale green glass, of which the principal part of the ring is composed, is overlaid on the upper surface by a bright blue glass, and into this are worked wavy lines of white enamel, the centre of each wave being ornamented by a patch of yellow enamel; a line of white enamel also goes round the side of the ring. This would be a showy and not inelegant adornment of the female arm. Though the glass is not of superior quality, as there are here and there air vesicles in it, yet it is not in any degree decomposed.

Near to this hut is a double dwelling, formed by two hut circles abutting against each other, but intercommunicating by a rude passage from 2 feet to 3 feet in width; the larger hut is 11 feet 8 inches, and the smaller 7 feet 8 inches in diameter; both of them are roughly paved with small stones. Within this dwelling an iron instrument was discovered at the depth of 18 inches. (*Plate XVI. fig. 12.*)

This iron relic is much oxydised; its form will be best understood by the figure. It is 3 inches long and $1\frac{1}{2}$ inch broad at the base, where there is a rude protuberance on each side, apparently the remains of a socket or ring by which it could be attached to a wooden pole; upward it tapers to a point, which however is broken off; it is somewhat bent inward, and though it may have had a sharp point there is no appearance of cutting edges. It seems to be a spear head of a very rude and imperfect form; and probably enough, is one of the earliest of iron weapons in the islands.

Of the other hut dwellings explored, one is 8 feet in diameter, and another of a long oval shape is 25 feet by 10 feet; but neither yielded any relics, excepting charred wood.

Fortified Dwelling on Swint law. (*Plate XV. fig. D.*) Eastward of this group of hut circles about 100 yards, a small Fortlet was examined, situated in the opening of a gorge on

the south side of White law ; it is of an oval shape 37 feet by 27 feet ; some rude small chambers were exposed, in which charred wood was found at the depth of 1 foot.

Fortified dwellings and hut circles north of White law. A deep and craggy gorge separates Gleedsleugh from White law, but at its western termination it widens into a valley which extends to the brow of the hill overlooking the broader valley between White law and Yevering Bell ; and here, there are several Fortlets and circular huts ; a few of which were explored, with little result excepting in one case. One very singular Fortlet was partly explored—*Plate XV. fig. D*—with walls 4 feet 8 inches in width, and with complicated internal arrangements ; there are enclosures within it of considerable size and one circle is 28 feet in diameter. A long enclosure was cleared, but no relics were discovered.

Other circular dwellings are grouped near to this Fortlet, varying in size from 20 feet to 80 feet in circumference. In one of these of an oval shape—*Plate XV. fig. F*—24 feet by 16 feet, charred wood was discovered on and around a flat stone in the centre, which doubtless was the hearth-stone of the primitive hut.

Further westward, about 200 yards, there is another cluster of dwellings near to a Fortlet which is of a squarish form rounded at the corners, and 45 feet by 40 feet. (*Plate XV. fig. E.*) Three of the huts which are from 10 feet to 15 feet in diameter were explored ; but no relics were discovered.

Most of the huts in all these valleys are of very rude structure. They are indeed little more than shallow pits, set round with stones ; but in many cases advantage has been taken of the slope of the ground, by digging the circles out of the hill side, so that excepting about the entrance, a low natural wall is obtained for the hut.

BARROWS.

Worm law Barrow. On Worm law, which is elevated ground in the valley about 900 yards north-east of the summit of Yevering Bell, a Barrow was explored. It was 120 feet in circumference, but of inconsiderable height, and formed of stones and earth. At the depth of 2 feet a Cistvaen was discovered, made like other Ancient British interments of slabs, (in this case porphyry,) set on edge ; two slabs formed the east side, one the west side ; another was at the west end with a smaller upright stone inserted in the corner ; there was neither a covering stone nor one at the

north end. This Cist was placed in the centre of a circle of stones 26 feet in diameter. Within the Cist, charred wood and a few bones, which crumbled away on exposure, were found. Immediately however above the Cist and among the covering earth and stones, flints, potsherds, iron slag, and fragments of bone were discovered. From their fragmentary state, the bones were not determinable. The pottery is of the same coarse thick kind as was found on the summit of the Bell; one fragment is the top of a vessel having the lip turned outward. Though small, most of the flints have a sharp cutting edge, and are portions of broken weapons or instruments. One however is 2 inches long and $\frac{3}{4}$ inch broad at the base and contracting towards a point. The edge is serrated and it appears to have been a small saw. (*Plate XVI. fig. 13.*)

The broken flints and broken pottery cast upon the Ancient Briton's grave had very probably some religious meaning. Mr. Bateman notices, that *portions* of earthenware were sometimes burnt along with human bodies; and the Rev. Wm. Greenwell also in his account of the Ford interment states, that burnt fragments of various different vessels occurred. I cannot however detect evidences of burning in the pottery and flints of Worm law.

Fascinated with the simplicity of the Scandinavian classification of stone, bronze, and iron ages, many of our antiquaries with more zeal than success have applied it to British antiquities. Weapons of stone or wood or bone may, in many parts of the world, have been used before those of metal; but it is not certain, that metals were unknown altogether in any period of British history. Metals are absent from most of the early deposits; but we occasionally find along with simple flints, which are understood to mark an early period, other objects which imply the use of metals; as for example the intractable porphyry querns, which could not have been fashioned by mere stone instruments. The discovery too of iron slag, along with flints and coarse Celtic pottery, has a peculiar significancy. It is the second authenticated instance of iron in Celtic interments in Northumberland. An iron weapon was found in a Cist at Tosson along with undoubted Celtic urns; and here at Worm law it is in the state of slag; and this leads to the inference, that not only were these ancient Barrow builders acquainted with the use of iron, but that they also manufactured it from the ore.

Similar facts mutually illustrate each other. Slag heaps

seen in the wild moorlands have excited wonder. How and when came they there? has been often asked but never answered. One such heap there is on the Eglingham moors; and another on the Harehope moors; and both are in the midst of Ancient British camps and dwellings. Respecting them, there are no traditions, and connected with them are no remains of furnaces or other buildings; their great antiquity is unquestionable. At no great distance from them, the common ironstone of the carboniferous formation occurs along with coal and limestone. It is therefore not improbable, that these heaps of iron slag mark the spots where the Ancient British people smelted the iron out of the stone ore of the district.

About 60 yards eastward of the Worm law barrow there stood a Monolith (*Plate XV. fig. M*) 8 feet in height, but it is now prostrate; diggings were made around it, but without yielding any results.

Other Barrows. Near to Fortlet (C), a barrow (N), having two large upright stones standing on its west side, was examined, and at the depth of 3 feet charred wood was found.

On Swint law, three other Barrows (O, P, Q) were cut into; one was 56 feet in circumference and 3 feet high, and at its base charred wood appeared strewn over a rough pavement of stones firmly bedded together; another, near to the hut containing the glass armlet, was 53 feet in circumference and guarded on its east side by two upright stones; and a third smaller Barrow had also a stone standing sentinel in its south side; but none of these yielded relics.

Tom Tallon's Grave. Southward of Yevering Bell, little more than a mile, is Tom Tallon's Crag, an outbreak of porphyry on the crest of a ridge; and near to it, on a high breezy hill looking westward to the Newton Tors, a very large cairn stood, called "Tom Tallon's grave;" or "The auld wife's apron fu' o' stanes." Tradition says nothing of the hero whom the cairn has failed to immortalise, nor is there any legend to give meaning to the phrase "The auld wife's apron fu' o' stanes." Strange enough, large collections of stones, great monoliths, and huge cromlechs have not unfrequently been attributed to "auld wives." Ure, in his history of Rutherglen, describes as a Druids' altar a remarkable cromlech, called the "three auld wives lift," tradition saying that three old women, having laid a wager who would carry the greatest burden, brought in their aprons the three stones

of which the cromlech is constructed. Ure refers the tradition to the Druidesses, who he says "might at this place superintend the sacred rites." Such traditions and phrases, however, more probably have their origin in the belief in witchcraft supposed to have been exercised by old women.

This cairn was the largest in the district. When I examined it in 1857, only one half of it was remaining; but I ascertained that, when complete, it was 240 feet in circumference. The remaining half was taken down in 1859 to build a boundary wall; and so great had this cairn been, that this fragment supplied stones to build more than a 1000 yards of a wall, which is 5 feet in height and 2 feet 2 inches in breadth. The removal of the stones, however, proved the cairn to have been sepulchral; for underneath its eastern portion a Cist-van of the usual kind was discovered, which was $3\frac{1}{2}$ feet long and 18 inches broad, and placed in the direction of north-west to south-east. The bottom was flagged and a very large slab covered the top. Nothing however was in the Cist excepting a few bones which mouldered away on exposure.

The facts elicited from the examination of the Barrows tend to shew, that cremation of the dead was practised perhaps not exclusively but to a certain extent by the Ancient British or Celtic people in the neighbourhood of Yevering.

In estimating the age of the antiquities explored, we must distinguish between their original construction and later occupation. Indeed we are more likely to find relics of the later than of the earlier population. But though the relics discovered at Yevering mark different periods, yet all the Forts, fortified dwellings and hut circles examined, appear to me to be pretty nearly of the same age and to be the work of one people or race. Their general character allies them to the antiquities explored last year in the Valley of the Breamish. The diggings at Yevering have been more productive of stone weapons and instruments of the simplest kind made of flint; and their presence unmistakably indicates an early period; and this conclusion is strengthened by the rude pottery associated with them. We may therefore safely refer the first construction and occupation of the Forts and dwellings to the Celtic or Ancient British race, and to a time long anterior to the Roman invasion. Here, however, this people lived for many generations and centuries, progressing somewhat in civilization and art; yet during this lapse of

time, there appears little or no change in their habitations and modes of life ; for we cannot detect the introduction of any new architectural ideas into their Fortlets and dwellings.

To the early period when flints were in general use, we may refer the wood rings which had been applied either to ornament the arms or to cincture the hair of women, and, perhaps too, the copper fibula found on the top of the Bell. The pretty glass armlet might be claimed as Roman ; but as glass beads of similar manufacture have been obtained from Celtic deposits, this may have been imported, probably by the Phœnicians, and it doubtless adorned the arm of some Ancient British beauty.

The glazed pottery however is a relic of the latest period of occupancy. That it had been left from the breakage of a vessel used by a shepherd when taking his meal is improbable ; for it occurs in two different Fortlets, in considerable quantity and under debris of some depth. As it is in fragments, the size and shape of the vessels to which it belonged are not determinable. Such pottery might belong to any period between the Romano-British and mediæval times ; and it has been held, that some hut circles have been inhabited down to this latter period ; but the absence of other mediæval relics in the Yevering Fortlets throws doubt on the supposition as applied to them. Such frail structures indeed would be untenable in the Border-land at this period, when it was necessary for the protection of life and property, that dwellings should be clustered around and defended by pele towers with strong walls of stone and lime. Until however some further information is obtained relative to this pottery, I would not speak positively as to its age ; but I am inclined to think, that it betokens Roman influence on Ancient British fictile art, and that it belongs to the period when Rome had established her dominion over Britain, but had not altogether revolutionised the habits of the people.

I have been informed, that a glazed pottery, similar to that in the Yevering Fortlets, has been found in France in deposits of the Romano-Gaulish period. I know of two instances only of a glaze on relics, which could be supposed to belong to the Ancient British people ; one is an opalised glass armlet with a yellow glaze, which was found under a large cairn at Bogheads, Aberdeenshire, along with beads made of cannel coal, and which is now in the Museum of the Society of Antiquaries in Edinburgh ; the other is recorded by the late Mr. Bateman in his "*Ten Years Diggings*." In a

Barrow seven miles north of Pickering, 56 yards in circumference and 8 feet high, he found, at the depth of 4 feet, some pieces of a kiln-dried vessel, partially covered with a *green glaze*, along with two flat stones, rubbed into a circular shape, and some flints, including a lance head and two round instruments on the natural surface; four feet further down charcoal only was discovered.* These facts taken in connection with the character of the glazed pottery in the Yevering Fortlets suggests the inquiry, whether some at least of the domestic vessels of the Ancient British people were not glazed and of better manufacture than the ordinary cinerary urns.

The querns found bring again before us the fact, that corn was cultivated and used at an early period; and here I may notice the extraordinary terraces or "baulks" as they are locally called, which occur at Heathpool on the Colledge. Similar terraces are seen in the valley of the Breamish, but those on the Colledge are more marked, distinct, and numerous. White hill near to the farm house is terraced to its summit. These terraces are generally flat, but some are slightly convex; they are smooth and resemble carriage drives cut out of the hill side; they are not quite horizontal nor are they all parallel; some run into or inosculate with each other, and in such cases one or two other terraces are intercalated for a short distance. Their breadth is from 10 feet to 42 feet; usually it is about 20 feet; they rise above each other by nearly perpendicular steps which vary in height from 2 feet to 15 feet, generally it is about 4 or 5 feet. I counted 16 of these terraces rising in succession above each other on this hill; but other higher hills in the district are terraced in a similar manner up, I estimated, to the height of 1000 feet above the sea level; and these high terraced hills seemed in the distance like the gallery of a great amphitheatre with benches cut out of the hill sides. The want of horizontality and of parallelism shews, that these terraces have not been formed by the action of water; nor do I know of any natural agent which would produce them; evidently indeed they are the work of art—ancient terraces, I believe, of cultivation for the growth of corn, most probably dating backward to a very early period, as they are associated more or less with Ancient British remains. They have been used for this purpose down even to the middle of last century.

* Bateman's *Ten Years Diggings in Celtic and Saxon Graves*, p. 204.

Two reasons would lead to the adoption of this method at an early period—less mechanical power would be required to form ridges along the side of the hill, and the heavy rain-falls of the mountainous regions would be less liable to wash away the soil from ridges that were horizontal, than from those up and down the hill.

The relation of the various antiquities about Yevering to each other presents some points of interest. That the Bell was a Druidical temple, is a romantic fancy which melts away before modern criticism; but we see instead an important use in this strong Fort, as a secure place of temporary refuge for the people, who resided in the valley, whensoever they were assailed by a foe too powerful. It was to them what the mediæval castle was in later ages; and to this mountain top they would flee, with their flocks and herds, for there they had extensive and excellent pasturage, and a position almost impregnable from its natural strength and massive stone wall. The Fortlets near to which the hut-dwellings are clustered find also their parallel in the Borderland in the mediæval times. These Fortlets were the pele towers of the Ancient British race—the residences of the chiefs and strongholds for the protection of the people against sudden inroads. Exposure to similar dangers in these two periods has led to the adoption of analogous arrangements, which however were much modified by the difference in civilization. As the cottages of the Borderers nestled under the protection of mediæval pele, so were the ruder huts of Celts scattered in the valleys around or near to the strong Fortlets. The now peaceful valleys and hills in the district of Yevering tell the same dark story, as we heard from the vale of the Breamish. The Celtic period was marked by insecurity and warfare, else why such great forts, such strong dwellings, such massive walls, and such complicated defences?

As we wander over the narrow strip of hill country we have surveyed from Yevering to Homildon, we marvel however at the number of the ruined dwellings; wherever the valleys are dry, they are studded over with Fortlets and hut circles; and it is creditable to the intelligence of this ancient people, that they knew so much of sanitary science as to choose dry sites for their dwellings. There are evidences of a numerous population; and I estimate, that in the Celtic times, not less than 500 people lived in this limited tract of hill land where now the only human dwelling is a single shepherd's house.

STONE CIRCLE AT THREE STONE BURN, NORTHUMBERLAND.

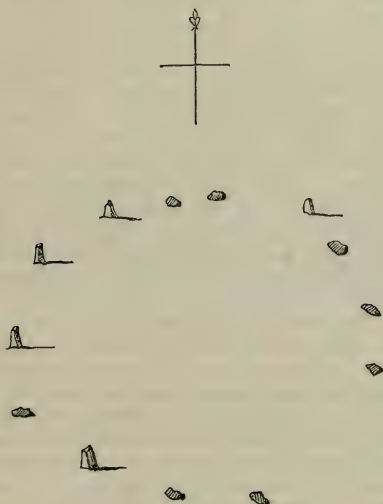
There are several stone circles in Northumberland, but the largest is at Three Stone Burn in a bleak and lonely valley among the Cheviot hills. It stands about four hundred yards to the westward of the farm house, on flat peaty ground, covered over with heather, on the north side of a brawling burn, which when swollen with rain is a wild and destructive torrent. Grim and rugged crags of the Cunnion bound this broad valley in the south, while the tamer outline of Dunmore curves towards the glen between it and the rounded Hedgehope; westward the ground slopes steeply to the ridge of Housey Crag, behind which the broad-backed Cheviot is seen; Tathy Crag is the crest of another hill on the north-west, which sweeps round to the Middleton crags bounding the valley on the north; and through its opening on the east, a view is obtained of the sandstone ridges forming the hills of Beanley and Alnwick Moor. Damp and boggy, this valley does not afford distinct traces of an ancient population, such as are found in the dry hopes and valleys around Yevering.

Before making excavations into the Three Stone Burn circle, eight stones only were visible—five standing upright and the others prostrate. Trenches were cut along the circumference of the circle and around some of the stones; two were cut at right angles through the centre, and other trenches were cut parallel to these, down to the natural surface and in some parts below it. The examination of this circle was therefore amply sufficient.

Five other stones part of the circle were found buried beneath the peat; so that as now seen it is formed of a single row of thirteen stones. The circumference is 340 feet; but the shape is elliptical, the longest diameter, from east to west, being 112 feet, and the shortest, from north to south, 96 feet. The plan on the next page shews the relative position of the stones, and indicates those which are still upright. Their distance from each other varies from 13 feet 2 inches to 31 feet, excepting on the south-east, where there is a wide gap of 57 feet—perhaps one stone may be wanting here. Eighty years ago however, there was the same number, and eleven were then visible; but tradition said that there were originally 12 stones, and that the discoverer of the lost one would find beneath it a hoard of gold. The tenant, then occupying the farm, with at least a half faith if not entire reliance on

the legend, dug round the circle, but alas ! he discovered too much, for instead of twelve he found thirteen stones—an unlucky number, and hence no gold rewarded his labours !

PLAN OF THE THREE STONE BURN STONE CIRCLE,
DISTINGUISHING THE FIVE STONES NOW STANDING UPRIGHT.



All the stones are of the porphyry or syenite, which form the hills around ; the sizes are various, the smallest being 21 inches and the largest 5 feet 5 inches high. The three tallest stones, each being 5 feet or more, are prostrate. Two standing are 3 feet 9 inches and 4 feet high, the former being the bulkiest of the whole, for it is 10 feet round, and weighs, I calculate, about 2 tons. It is not necessary to suppose, that these stones had been brought from any distance ; for the valley is covered with gravel and rolled blocks, which are especially large by the side of the burn. Such mountain streams, when flooded with a heavy rain-fall, have immense power in transporting rocks from the higher to the lower grounds. One great block, now lying in the burn, and not

less than ten tons in weight, was rolled down a distance of twenty feet by a recent flood, and was stopped in its course by another large stone.

Three of the standing stones are near to each other, and hence the origin of the comparatively modern name of *Three Stone Burn*.

The excavations along the circumference shewed distinctly, that the circle of stones was single, and that no wall or other works connected them with each other; nor is there any ditch or rampier around it. The diggings within the circle were through peat; and the old natural undisturbed surface was reached at the depth of 15 inches. Charred wood was found on this surface in several places; and only one other relic, a flint, was discovered in the centre. This flint is but a small fragment less than an inch long, and three eighth's of an inch broad. The breadth however is entire; and the instrument has been carefully made; it has two cutting edges and seems a portion of a small knife. (*Plate XVI. fig. 14.*) This relic though small is significant, and taken in connection with the structure of the circle enables us, without much hesitation, to refer it to an early Celtic period.

What purpose then did this stone circle serve?

All stone circles were formerly, without discrimination, described as Druidical temples. The tide has set in against this notion, and such circles are as indiscriminately regarded by many as places of sepulture. But there is a considerable difference among stone circles: some are single rows, as this at *Three Stone Burn*; others concentric rows, as *Stonehenge*; some enclose other circles, as *Abury*; and they vary in size from 20 feet or less in diameter to more than 1000 feet. It may be admitted, that the smaller circles are generally sepulchral; several were proved to have this character in the *Isle of Arran*, in *Westmoreland*, and elsewhere; and these might properly, as *Sir Gardner Wilkinson* proposes, be called circle-cairns. Circles of a large size do not appear however to have been constructed for the interment of the dead.

By an exhaustive process, we may arrive at a reasonable notion of the object of the *Three Stone Burn* circle. *It is not sepulchral*; for neither cist, nor urn, nor bones were found within it; and as five trenches were cut through it in different directions, if such existed, they would certainly have been discovered. *It is not a fort or camp*; for there is neither rampier nor ditch, and its position is naturally weak and defenceless. *It is not a dwelling*; for there are no hut

circles within, nor any pavement or internal arrangements. We are assured by Cæsar, that the Celts had a religion, and that the Druids were its ministers. What more probable, than that this circle of unhewn stones, placed in a wild region which would tend to nurse and strengthen superstitious feelings, was the temple wherein the Ancient Britons of the district assembled to join in the religious rites performed by their Druid priests? The very defencelessness of the place favours the idea; for as Druidism was the common religion of the people, its temple, being held sacred everywhere by all the native tribes, would need no external defence. The laws made against the superstitious use of stones in Saxon times prove, that rude stone erections were associated with religion; and in Scotland, as Dr. Wilson notices, the common Gaelic phrase—*Am Cheil thu dol do'n clachan*,—are you going to the stones, when inquiry is made whether a person is going to the church, “seems in itself no doubtful tradition of ancient worship within the monolithic ring.” Probably enough these circles were used also as courts of justice; for we learn from Cæsar, that assemblies were held in a *consecrated place*, where the Druids decided controversies.

* Cæsar, Lib. VI. cxiii.

PLATE XV.

MAP of Yevering Bell and the neighbourhood, shewing the Ancient British Fort, Fortlets, Hut circles, Barrows and roads.

PLATE XVI.

Relics from Yevering and the neighbourhood:—

- Fig. 1. Flint knife, Yevering.
 „ 2. Copper, part of a Fibula, Yevering.
 „ 3. Pottery, Yevering.
 „ 4. Oak ring, „
 „ 5. „ „ „
 „ 6. „ „ „
 „ 7. Flint javelin head, Fortlet near Yevering.
 „ 8. Stone relic, „
 „ 9. Pottery with rounded rim, Fortlet near Yevering.
 „ 10. „ ornamented, „ „
 „ 11. Glass armlet, Hut circle, Swint law.
 „ 12. Iron weapon, „ „
 „ 13. Flint saw, Worm law Barrow.
 „ 14. „ knife, Three Stone Burn stone circle.

Notices of the Remains of Ancient Camps on both banks of the River Tweed, near Milne-Graden. By DAVID MILNE HOME, Esq., with a Plan, Plate XIV.

ON the estate of Milne-Graden, adjoining the River Tweed, on its north bank, in the parish of Coldstream, there is a field called the Snuke or Snuick. The highest part of this field is close to the river, and is occupied by the remains of an old camp. These remains consist of three embankments, with a deep ditch between each, forming curved lines, concave towards the river. These embankments are highest and the ditches deepest towards the west end, that is looking up the river; towards the east, or down the river, they are less distinct and prominent. At the west, the distance between the southmost and middle embankment, at the base, is about 10 yards; between the middle embankment and the northmost, 6 yards. The height of the southmost embankment above the ditch or fosse is $10\frac{1}{2}$ feet; of the middle embankment, 9 feet; of the northmost embankment, 7 feet. The total length of the northmost embankment is about 750 yards.

The bank of the river within the limits of these embankments consists of a precipitous rock about 80 feet high, quite inaccessible on that side. The embankments would afford to any body of men, lying within their compass, great advantages in repelling a hostile attack from any other side. The view of the surrounding country is moreover from this point extensive.

About a quarter of a mile above this old Fort, a ford crosses the river Tweed, long known by the name of Graden Ford, and more recently Twizel Ford, so named from the old castle, situated about a mile to the S.E., between the rivers Tweed and Till, and close to which castle the road passes leading to this ford. The embankments of the Snuke Camp are so drawn, that the passage of this ford could easily be watched by persons in the camp or lying in the ditches between the embankments.

Within the lines of these embankments, there formerly stood a stone building probably occupied as a dwelling-house; for when some drains were made in that part of the field, a few years ago, a stone was discovered, about 4 feet in length, with holes in it, which appeared to have been used as a side for a window with iron bars.

The following extract from Godscroft's History, confirms

this inference. George Home, (of Wedderburn,) about the year 1510, with the view of approaching a person of the name of Garner, “goes to Graden, early in the morning, and surrounds his house. He being in the fields, and seeing so many horsemen, and to whom they belonged, thinking that they were seeking him, he takes his flight into England : but finding that passage (across the Tweed) stopped by David, George’s brother, who had been sent there with a few attendants for that purpose, he changes his intention, and directs his course to a *House* of his superior’s in the neighbourhood, *built within a small fortification called the Snuik* ; and having shut the door, he endeavours to defend himself. George pursues him ; and as he refused to come out, he sets fire to the doors. Terrified with this, he surrenders himself, and is brought to Wedderburn Castle.”

Sir Richard Bowes, in the account which he gives about the year 1542 of the middle marches, on the English side, refers to the “forde called Graydon forde, enteringe into the water of Twede in the feldes of Twysle upon the south syde, and stretcheth unto the feldes of Graydon upon the northe syde.”

That it was the practice in ancient times, to have the fords across the Tweed narrowly watched, appears from “the Order of the Watches, made by the Lord Wharton, Lord Depute General of all the three marches under my lord of Northumberland, in the month of October in the 6th year of the reign of King Edward VI.,” viz. in the year 1552. In specifying “the watches upon the water of Twede, from Tyllmouth to the Belles,”—near Berwick,—there is an order for Graddon ford to be watched with two men nightly, of the inhabitants of Gryndone.”

On the south side of the river, opposite to Snuke, which here forms an isthmus lying between the rivers Tweed and Till, there are many remains of military works. This was evidently an important position, not only because of its commanding the passage of the River Tweed; but because of the protection to troops afforded by the contiguous high banks of the two rivers. Here stood the Castle of Twizel,—the old walls of which may still be seen, inside of the colossal fabric which bears the same name. In the Border Survey taken in the year 1542, and quoted in Raine’s History of Durham, (page 314,) notice is taken that “at Twysle, nere unto the said ryver of Twede, there ys standing the walls of an old fortresse or castell, razed and caste down by the kinge of

Scotts in a warre 40 yeres and more since." "In the Survey Book of Norham," (quoted in Raine's, page 18) as made out in the year 1562, it is mentioned under the head of "Twizell," that "there hath beene in the said towne one towre or pile, which is of auneyent tyme decayed and cast down, and there remaineth one part or quarter thereof, and a Barnkin about it: and in the same hath beene a certayne demayne and 10 husband lands, and 6 cottages."

The position of the barn and demayne seems to be indicated by a few venerable ash trees, situated to the east of the castle, which so often also in Berwickshire indicate the former existence of substantial dwelling-houses. It is said that there was in these days a law which required persons who built dwelling-houses to plant ash trees about them.

In the old grass field to the east of Twizel, there are the visible signs of an embankment, with its concave side towards the south, where there is a precipitous bank, and which apparently had formed a military redoubt. On the north side, the land is still marshy, and probably it was formerly made much more so, for the sake of defence on that side. On the N.E. side of this embankment, there is a memorial stone, consisting of an oblong block of blue greenstone, about 4 feet high above the surface of the ground, erected no doubt to commemorate some event of great public interest at the time, but which has faded altogether from our traditionary knowledge.

I have attached to this notice, a rough plan of the district, on which I have indicated the position of the old military works. (*Plate XIV.*) The letter A. indicates the site of Snuke Castle; B. the memorial stone just mentioned.

Near the junction of the Till with the Tweed, there seems to have been an old burial-ground, at the point marked C. Mr. Scott, the tenant of Twizel fishery, tells me, that some years ago, he took many barrow-loads of bones from this place, to his garden, but with the worst effects on his crops, in consequence as he thinks of having given them an overdose. I have myself picked up a few fragments of bones at this place.

It may not be out of place to mention here, that one of Lord Wharton's orders before referred to was that "Twysel Bridge be watched with two men nightly, of the inhabitants of Twysell."

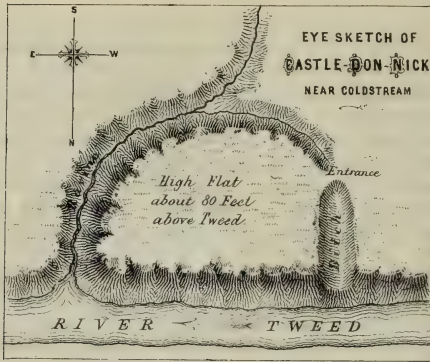
The Rev. Mr. Jones of Branxton informs me that "a few years ago, three earthen pots filled with the silver coin of

Edward I., were found close to the Railway Bridge on the east side of the Till. One of the men who scrambled for the coins, mentioned that they were deposited behind a large slab overgrown with briars, which evidently had been placed there with the view of concealing the treasure ; in all probability these coins had been hid by some men of King Edward's army, when on its march into Scotland, and who never returned to lift them. Two or three hundreds of these coins were found by the navvies when cutting the line of Railway on the Till banks. I have one or two in my possession."

With regard to the meaning of the word Snuke, it may not be out of place to mention that Bailey, in his Dictionary, says, that "to snook" means in old Scotch "to lie lurking for a thing." Jameson says it means "to smell out as a dog does,"—"to search out insidiously," or "sneak out." These definitions are quite congenial with the object for which I suppose the camp at this place was formed, and for which it was used.

It may not be altogether out of place here to advert to the old encampments which formerly existed, on both sides of the Tweed, a few miles above Milne-Gradon, situated to the east of the town of Coldstream. That on the south side of the river, is immediately opposite to Lennel House, and goes by the name of "Castle-Stone-Nich," which Captain M'Laren of Coldstream, who first pointed out the spot to me, considers a corruption of "Castle-don-Nick," being the castle on the river at the nick. This spot consists of a small piece of flat land, about 80 feet above the Tweed, protected by the bank of the river on the north forming there an almost vertical cliff, and on the east and south by a ravine, deep and narrow, which by having cut through the straight river bank, gives the appearance of a "nick." On the west, and S.W. sides, ditches have been made, in order to afford protection, and between these, the old entrance is still manifest. (See sketch, p. 458.)

Captain M'Laren informs me, that about 40 years ago, the remains of a stone wall, on the flat, at the N.W. angle were visible. On the north bank of the river, between the town of Coldstream and Coldstream Bridge, when the present road to the bridge was made, two ditches between embankments were discovered, as Captain M'Laren also informs me. He states that in one of the ditches deer's horns, and wild boars' tusks were found, besides a stone font which he has now in his



possession. It is probable that these ditches and embankments had formed part of a camp, similar in structure and object to the "Snuke" already described. The site was well chosen, as the ground here being high, an extensive prospect was secured over the country south of the Tweed, and the high bank of the river, on which the camp abutted, rendered it quite unassailable on that side. Captain M'Laren with some plausibility suggests that the town of Coldstream had derived its name, not from the cold temperature of the river (as is commonly supposed,) but from "Castra-ham," the hamlet near the camp.

Here as in other parts of the River Tweed, the chief object of the camps is indicated by the existence of fords by which a passage across it could be obtained.

The two camps now described are situated between two fords, the upper one having been at the junction of the Leet and Tweed, the lower one about a mile distant, being opposite to the village of Lennel, from which there still exists an old parish road leading to the ford.

It is rather remarkable, that these fords exist at the present day, notwithstanding the lapse of several centuries. The circumstance proves, how very little the river must have changed, during that long period, either in its course or in the levels of its channels. How very remote then in time, must have been the formation of those old river banks, which line most of the old Haugh lands, and at levels from 15 to 20 feet above the present levels of the river.

Miscellanea Zoologica. By R. EMBLETON.

LANIUS EXCUBITOR; *Greater Butcher Bird*. I obtained a very fine specimen of this bird in the month of October, at the Longstone, Farne Island,—it was feeding upon a *Robin* when shot.

CREX PORSANA; *Spotted Crake*. The specimen in my possession was shot in the month of April, on the Longstone, Farne Island.

TRIGLA PINI; *Red Gurnard*. Two specimens of this rare fish upon the East coast, have been sent me during the months of October and November.

SQUALUS CORNUBICUS; *The Porbeagle*. Beadnell Bay, October, 1862.

CYGNUS FERUS; *The Whistling Swan*. Two specimens were shot here on the 2nd December, 1862. They were birds of the second year.

Note on NOCTUA TENGMAIMI.

The *Little Owl* recorded in page 232 of the Proceedings, caught in March 1861, at Spittleford, near Embleton, has been critically examined by Wm. Brodrip, Esq., one of our members, and he reports that it is the species *Noctua Tengmalmi*.

Places visited by the Members of the BERWICKSHIRE NATURALISTS' CLUB since its formation in 1831.

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	1832.			
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June 18.	Langleyford . . .	i.	5	
July 18.	St. Abbs Head . . .	i.	5	
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	1833.			
April 16.	Cockburnspath . . .	i.	15	P. J. Selby, Esq.
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May 4.	Houndwood Inn . . .	i.	103	Rev. John Baird.
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	1837.			
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	1838.			
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	1839.			
May 1.	Chirnside . . .	i.	180	Rev. Thomas Riddell.
June 19.	Coldingham . . .	i.	181	
July 24.	Birgham . . .	i.	182	
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1842.				
May 4.	Coldstream	ii.	3	Dr. Johnston.
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Sep. 28.	Lowick	ii.	42	
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1843.				
May 3.	Horncliffe or Horckley	ii.	43	Prideaux John Selby, Esq.
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July 26.	Yetholm	ii.	47	
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July 24.	Dunsdale	iii.	6	
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July 16.	St. Boswells	iii.	57	
Sep. 3.	Grant's House	iii.	85	
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1852.				
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PLACES OF MEETING

OF THE

BERWICKSHIRE NATURALISTS' CLUB,

From 1831 to 1862.

ABBAY St. Bathans, 1832, 1834, 1842, 1844, 1849, 1853.	Haggerston, 1837.
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Burnmouth, 1849.	Longhoughton, 1852.
Chatton, 1836, 1846, 1857, 1862.	Lowlyn, 1849.
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	Yetholm, 1836, 1843, 1857.
	Yevering, 1862.

BERWICKSHIRE NATURALISTS' CLUB.

LIST OF MEMBERS.

	Date of Admission.
1. WILLIAM BAIRD, M.D, British Museum, London ..	Sept. 22, 1831
2. Robert Dundas Thompson, M.D., 41, York Terrace, Regent's Park, London	" "
3. Robert C. Embleton, Beadnell	" "
4. Prideaux J. Selby, Twizel House, Chathill ..	April 20, 1832
5. Sir William Jardine, Bart., Jardine Hall, Dumfriesshire ..	Sept. 19, "
6. Rev. Thos. Knight, The Rectory, Ford ..	April 16, 1833
7. Francis Douglas, M.D., India	July 30, 1834
8. Rev. Henry Parker, Rector of Ilderton, Alnwick ..	Sept. 17, "
9. David Milne Home, Milne Graden, Coldstream ..	Sept. 21, 1836
10. Frederick J. W. Collingwood, Glanton Pyke ..	May 6, 1840
11. Jonathan Melrose, W.S., Coldstream	" "
12. Rev. John Dixon Clark, The Hall, Belford ..	Dec. 16, "
13. David Macbeath, Berwick-upon-Tweed	" "
14. John Boyd, Cherrytrees, Yetholm	Sept. 18, 1841
15. Robert Home, Berwick-upon-Tweed	June 15, 1842
16. Charles Wilson, M.D., 43, Moray Place, Edinburgh ..	July 26, 1843
17. James Tait, Edenside, Kelso	" "
18. William Dickson, F.A.S., of Whitecross, Berwickshire ..	Sept. 20, "
19. William Brodrick, 7, Park Street, Bath	" "
20. John Turnbull, 16, Thistle Street, Edinburgh ..	" "
21. Rev. George Walker, Belford	" "
22. Ralph Carr, Hedgeley, Alnwick	Oct. 18, "
23. Rev. Matthew Burrell, Chatton	Sept. 3, 1845
24. „ George Rooke, Embleton	" "
25. Henry Gregson, Lowlyn, Beal	May 3, 1846
26. Rev. Hugh Evans, Scremerston	" "
27. „ William Lamb, Ednam, Kelso	June 3, "
28. Major Elliott, Berwick-upon-Tweed	May 5, 1847
29. Patrick Clay, Berwick-upon-Tweed	" "
30. George Tate, F.G.S., Alnwick	June 16, "
31. The Right Hon. the Earl of Home, Hirsell, Coldstream ..	Oct. 20, "
32. Rev. L. Shafto Orde, Shorestone, Chathill	" "
33. R. Hood, M.D., 5, Salisbury-street, Newington, Edinburgh ..	May 3, 1848
34. Rev. Samuel Arnott Fyler, Cornhill	June 25, 1849
35. „ W. Darnell, Bamburgh	July 25, "
36. Henry Stephens, Redbraes Cottage, Bonnington, Edinburgh	Sept. 12, "
37. Francis S. Cahill, M.D., Berwick-upon-Tweed	Oct. 18, "
38. W. H. Logan, Berwick-upon-Tweed	May 1, 1850
39. John Church, Bell's Hill, Belford	July 24, "
40. William Gray, East Bolton, Alnwick	" "
41. W. Smellie Watson, 10, Forth-street, Edinburgh ..	Sept. 18, "

			Date of Admission.
42.	John Craster, Lesbury House .. ..	..	Sept. 18, 1850
43.	Rev. Wm. Rigge, Peak Forest, Chapel-en-le-Frith ..	..	May 7, 1851
44.	Hugh Taylor, Alnwick and Earsdon .. ..	..	Oct. 15, ..
45.	William Forster, Alnwick .. ..	..	" "
46.	William Dickson, jun., Alnwick .. ..	..	" "
47.	John Turnbull, M.D., Coldstream .. ..	..	June 30, 1852
48.	Sir John Marjoribanks, Bart., Lees, Coldstream ..	..	" "
49.	Rev. George Selby Thompson, Alnham .. ..	..	" "
50.	George R. Tate, M.D., Royal Artillery, Hong Kong ..	..	Sept. 8, ..
51.	William Stevenson, Dunse .. ..	..	Sept. 7, 1853
52.	James Wilson, M.D., Berwick .. ..	..	Oct. 12, ..
53.	William Boyd, Hetton .. ..	..	" "
54.	Charles Stuart, M.D., Chirnside .. ..	..	Aug. 16, 1854
55.	Rev. F. R. Simpson, North Sunderland .. ..	..	" "
56.	" George Hans Hamilton, Vicar of Berwick ..	..	Oct. 25, ..
57.	Thomas Sopwith, F.R.S., 43, Cleveland Square, London ..	..	May 9, 1855
58.	Charles Rea, Doddington, Wooler .. ..	..	June 20, ..
59.	George Culley, Fowberry Tower, Belford .. ..	..	" "
60.	Ralph Galilee Huggup, Shorestone, Bamburgh ..	..	July 18, ..
61.	Rev. Charles Thorp, Vicar of Ellingham .. ..	..	Jan. 31, 1856
62.	John Church, jun., Bell's Hill, Belford .. ..	..	Oct. 29, ..
63.	Charles Watson, Dunse .. ..	..	" "
64.	Capt. Selby, R.N., Belle Vue, Alnwick .. ..	..	" "
65.	Rev. Thomas Leishman, Linton, Berwickshire ..	..	" "
66.	George Hughes, jun., Middleton Hall, Wooler ..	..	" "
67.	John Charles Langlands, Old Bewick, Alnwick ..	..	June 25, 1857
68.	Frederick R. Wilson, Alnwick .. ..	..	" "
69.	Thomas Scott, Broomehouse, Beal .. ..	..	June 29, ..
70.	James Gray, Kimmerston, Wooler .. ..	..	" "
71.	Dudley Coutts Marjoribanks, M.P., London ..	..	July 30, ..
72.	J. Scott Dudgeon, Spylaw, Kelso .. ..	..	" "
73.	T. Y. Greet, Norham .. ..	..	Oct. 28, ..
74.	Patrick Thorpe Dickson, Alnwick .. ..	..	" "
75.	William Sherwin, Barmoor Castle, Beal .. ..	..	" "
76.	Rev. Thomas Procter, Berwick .. ..	..	" "
77.	Matthew Culley, Horton, Belford .. ..	..	" "
78.	John Clay, Berwick .. ..	..	" "
79.	Rev. J. W. Dunn, Warkworth .. ..	..	" "
80.	" William Cumby, Beadnell .. ..	..	" "
81.	" William Procter, Doddington .. ..	..	Oct. 29, ..
82.	John Marshall, M.D., Chatton Park, .. ..	..	June 24, 1858
83.	James Robson Scott, M.D., Scotch Belford, Yetholm ..	..	" "
84.	Rev. J. Walker, Greenlaw .. ..	..	Sept. 22, ..
85.	John Stuart, F.S.A. Scot., Register House, Edinburgh ..	..	Oct. 27, ..
86.	John Wheldon, Paternoster Row, London .. ..	..	" "
87.	Middleton Dand, Hauxley, Acklington .. ..	..	June 28, 1859
88.	Rev. Aslabie Procter, Alwinton, Morpeth .. ..	..	" "
89.	Stephen Sanderson, Berwick .. ..	..	" "
90.	James Maidment, 25, Royal Circus, Edinburgh ..	..	" "
91.	L. Geo. Broadbent, Bamburgh .. ..	..	" "
92.	Dennis Embleton, M.D., Newcastle .. ..	..	" "
93.	Charles B. Pulleine Bosanquet, Rock .. ..	..	Sept. 29, ..
94.	James Alexander, M.D., Wooler .. ..	..	May 31, 1860
95.	Rev. J. S. Green, Vicarage, Wooler .. ..	..	" "
96.	Robert Douglas, Berwick .. ..	..	June 28, ..
97.	Rev. W. Dodd, Vicarage, Chillingham .. ..	..	" "
98.	R. M'Watt, M.D., Dunse .. ..	..	" "
99.	George Peat, Dunse .. ..	..	July 26, ..

			Date of Admission.	
100.	Rev. John Brooke, Houghton Sheffal	..	..	July 26, 1860
101.	Robert Graham, Embleton	..	..	" "
102.	Rev. Robert Jones, Branxton	..	..	" "
103.	Thomas Brodie, Ford	..	..	Sep. 13, "
104.	Rev. John Irwin, Berwick	..	..	" "
105.	John Riddell, Bewick Folly, Alnwick	..	..	" "
106.	Watson Askew, Paulinsburn	..	..	Oct. 11, "
107.	Fairfax Fearnley, Adderston, Belford	..	..	" "
108.	William Church, Bell's Hill, Belford	..	..	" "
109.	Rev. Edward A. Wilkinson, Bamburgh	..	..	May 30, 1861
110.	Robert Clay, M.D., Launceston	..	..	" "
111.	G. J. Williamson, Thames Street, London	..	..	June 27, "
112.	William Mackenzie, M.D., Kelso	..	..	" "
113.	J. A. H. Murray, Hawick	..	..	" "
114.	Charles Douglas, M.D., Kelso	..	..	" "
115.	James Patterson, Spital	..	..	" "
116.	Campbell Swinton, Kimmergham, Dunse	..	..	" "
117.	Rev. P. G. Douall, Kirknewton, Wooler	..	..	July 25, "
118.	Benjamin Nicholson, Hazelridge, Belford	..	..	" "
119.	Henry G. Dand, Togston, Acklington	..	..	" "
120.	Thomas Brewis, Eshot, Acklington	..	..	" "
121.	William Lowry, Barmoor, Beal	..	..	" "
122.	Rev. W. J. Cooley, Rennington, Alnwick	..	..	" "
123.	„ Robert Henniker, South Charlton, Chathill	..	..	" "
124.	„ William Greenwell, Durham	..	..	" "
125.	The Duke of Northumberland, Alnwick Castle	..	..	Aug. 29, "
126.	David Hope Somerville, M.D., Summer Hill, Ayton	..	..	" "
127.	John Waite, Dunse	..	..	" "
128.	Edward Hargett, 56, Queen's Street, Edinburgh	..	..	" "
129.	John Allan, Bellie Mains, Chirnside	..	..	" "
130.	Richard Hodgson, M.D., Carham, Coldstream	..	..	" "
131.	Sir Horace St. Paul, Bart., Ewart Park, Wooler	..	..	" "
132.	Major Hope Smith, Cruicksfield, Dunse	..	..	" "
133.	Captain M'Laren, Coldstream	..	..	" "
134.	Sir George Douglas, Bart., Spring Wood, Kelso	..	..	" "
135.	William Cunningham, Coldstream	..	..	Sept. 26, "
136.	Thomas Fryer, Grundon Ridge, Coldstream	..	..	" "
137.	William Wightman, Wooler	..	..	" "
138.	Rev. Court Granville, Alnwick	..	..	" "
139.	Thomas Landale, Temple Hall, Coldingham	..	..	" "
140.	William Dallas, York	..	..	" "
141.	James Bowhill, Ayton	..	..	May 22, 1862
142.	Professor Simpson, M.D., Edinburgh	..	..	June 26, "
143.	Thomas G. H. Burnet, Newcastle-on-Tyne	..	..	" "
144.	John Helson, Jedburgh	..	..	" "
145.	Christ. Allan, M.D., Wooler	..	..	" "
146.	John Scarth, Munderston, Dunse	..	..	" "
147.	Septimus Smith, Norham	..	..	" "
148.	John Paxton, Norham	..	..	" "
149.	Robert Weatherhead, Berwick	..	..	" "
150.	John Howison, Newcastle-on-Tyne	..	..	" "
151.	Thomas Mason, Paulinsburn, Coldstream	..	..	" "
152.	Rev. J. B. Strother, Berwick	..	..	" "
153.	Robert Ballantyne, M.D., Jedburgh	..	..	" "
154.	Charles Anderson, Jedburgh	..	..	" "
155.	John Hume, Jedburgh	..	..	" "
156.	Henry R. Hardie, Stoneshiel, Ayton	..	..	" "
157.	George Helson, Jedburgh	..	..	" "

	Date of Admission.
158. William Elliot,	June 26, 1862
159. James Tait, 7, Union Street, Kelso	" "
160. Alexander Jeffrey, F.S.A. Scot., Jedburgh	" "
161. Alexander Jerdon, Jed Foot, Jedburgh	" "
162. Rev. J. C. Bruce, L.L.D., Newcastle-on-Tyne	July 31, "
163. John Tate, Bilton House, Alnwick	" "
164. Robert Crossman, Chiswick House, Beal	" "
165. Rev. J. B. Roberts, Shilbottle	" "
166. „ Peter Mearns, Coldstream	" "
167. W. Watson, Hackney, London	" "
168. John Spottiswoode, Spottiswoode, Lauder	" "
169. J. M. Meggison, Berwick	" "
170. A. Brown, M.D., Coldstream	" "
171. David Page, Gilmoun Place, Edinburgh	" "
172. Mr. Bailes, Scremerston, Berwick	" "
173. William Crawford, Dunse	Aug. 15, "
174. Rev. James Dand, Ancroft	" "
175. George Rea, Middleton House, Alnwick	Aug. 28, "
176. David Ferguson, Dunse	Sept. 25, "
177. James Wood, Dunse	" "
178. John Tait, M.D., Dunse	" "
179. James Falla, M.D., Jedburgh	" "

EXTRAORDINARY MEMBERS.

Mrs. Dr. Johnston, Berwick.
Mrs. Bell, Coldstream.

Miss Hunter, Anton's Hill.
Lady John Scott.

ERRATA.

- PAGE 5, line 29, insert "as" before "parcel."
 „ 6, line 21, for "an early English church" read "a church of the decorated period."
 „ 10, line 4, for "ground plan" read "first floor."
 „ 19, line 5, for "by" read "in."
 „ 21, line 7, for "1299" read "1249."
 „ 21, line 21, for "1299" read "1249."
 „ 34, line 34, for "lovile" read "lovite."
 „ 40, line 30, insert "last" before "meeting."
 „ 110, line 3 from the bottom, for "tracks" read "tracts."
 „ 114, from line 15 from the bottom omit "12;" and below this line insert "12. H. Virgata, Da Costa."
 „ 107, line 16, for "Dunstan" read "Beadnell."
 „ 171, line 30, for "Chefn Uchaf" read "Cefn Uchaf."
 „ 171, line 30, for "Now Chefn" read "Now Cefn."
 „ 171, lines 32 and 33, for "Chefn, subst. masc., plural Chefnau" read "Cefn, subst. masc., plural Cefnau."
 „ 172, line 5, for "Chefn therefore readily becomes Cheven. The plural formation is Chefnau" read "Cefn therefore readily becomes Cheven. The plural formation is Cefnau."
 „ 179, line 26, for "Rutherford" read "Butterfield."
 „ 249, line 11, for "Hyloptychius" read "Holoptichius."
 „ 443, lines 11 and 12, for "fig. D." read "fig. D*."
 „ 455, line 2, for "approaching" read "apprehend."

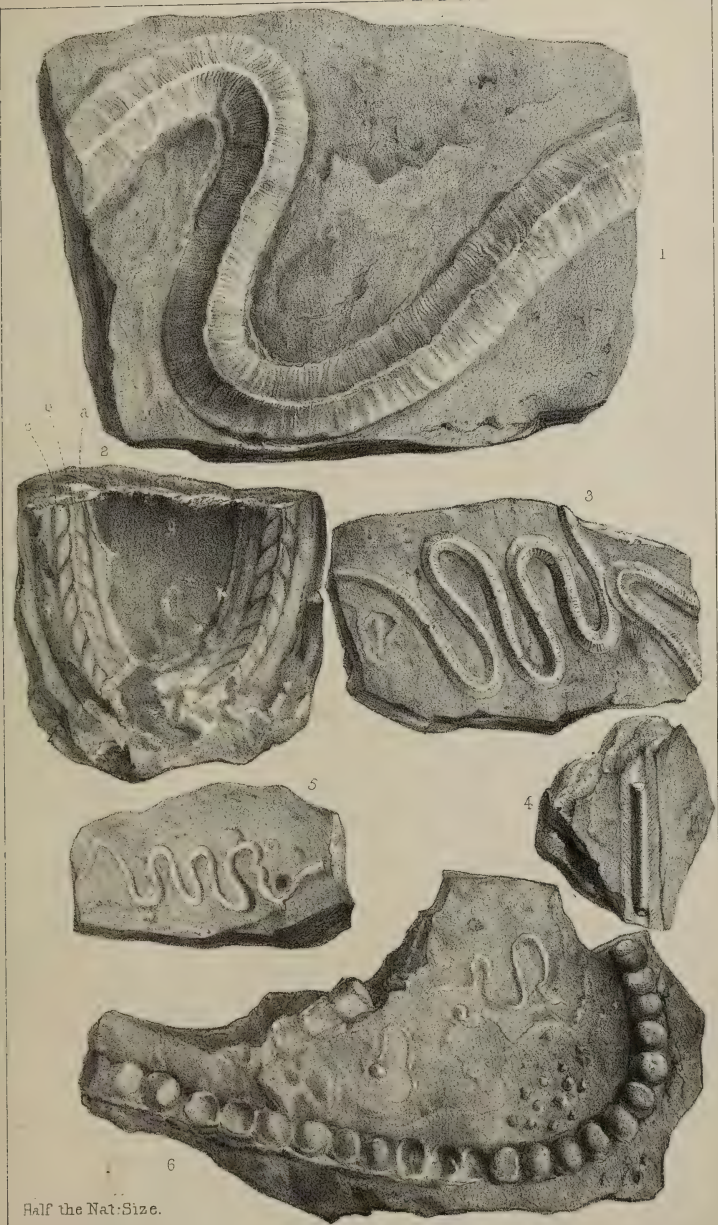
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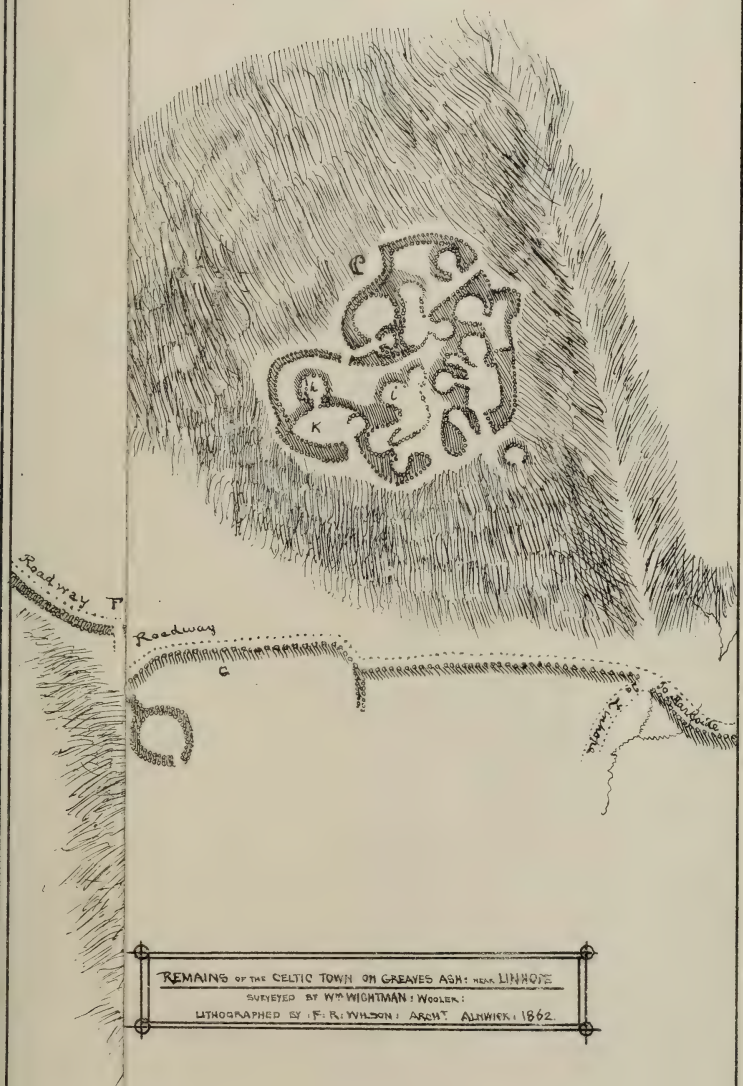


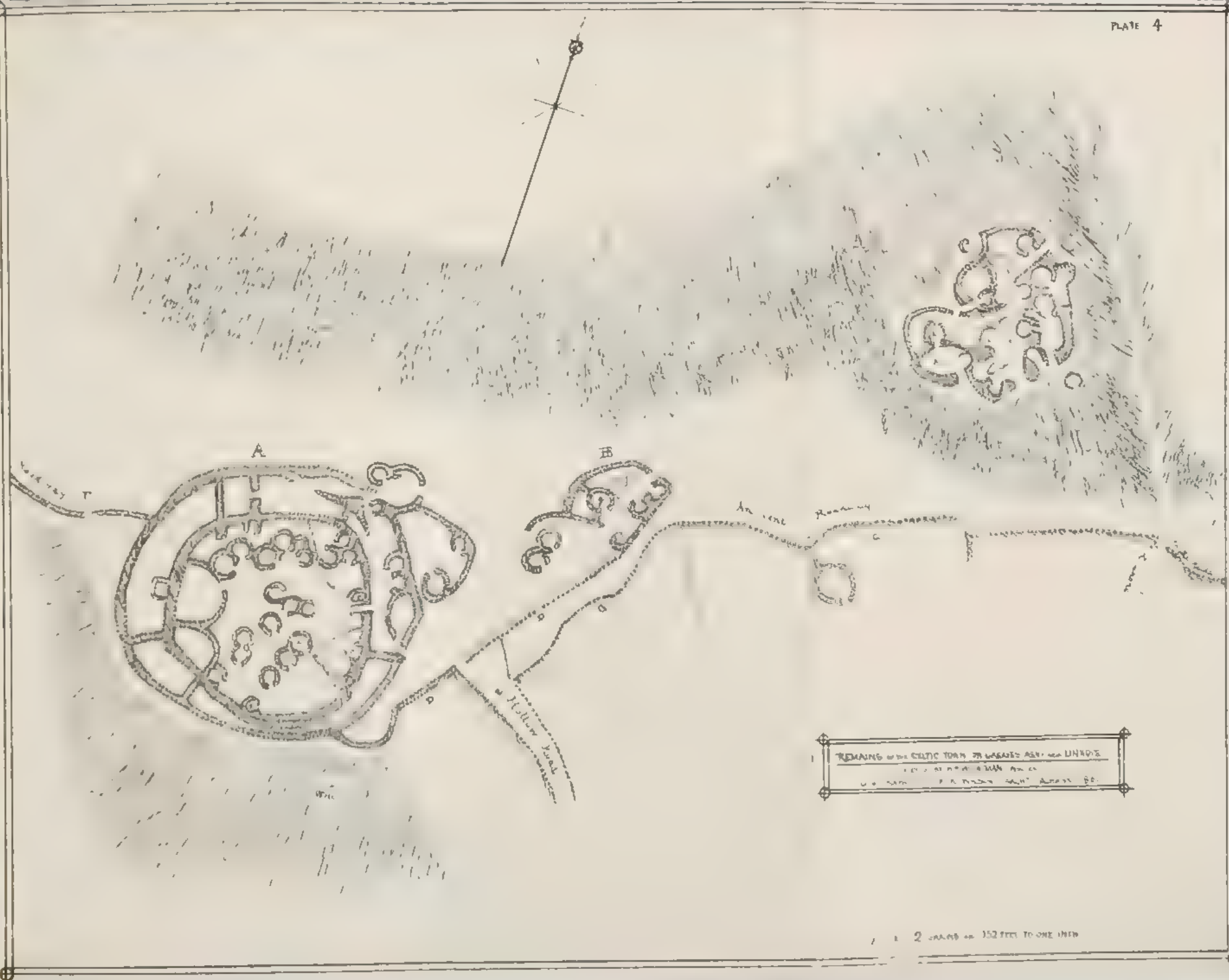
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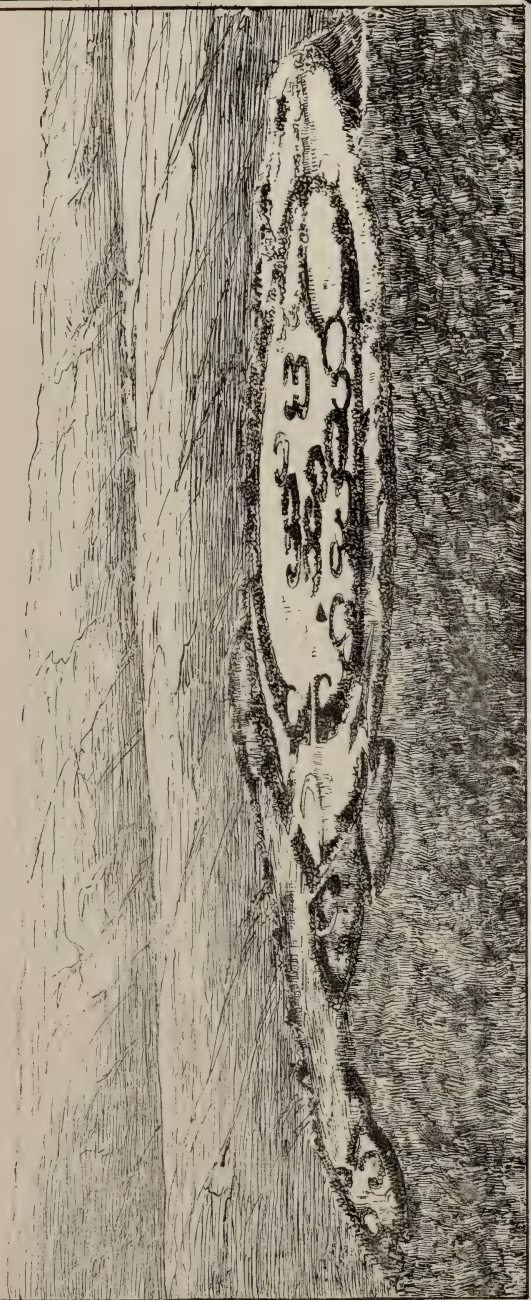
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BACK VIEW OF PALM OF ANTLER OF MEGALOCEROS HIBERNICUS
Found at Coldingham Oct 1859.





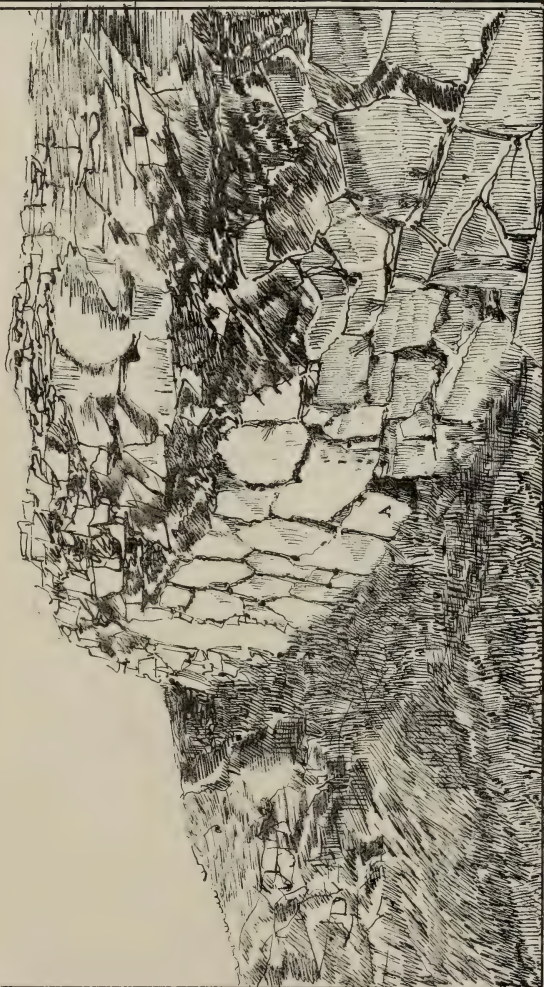




THE OLD CELTIC TOWN - GREENISDASH, LINCOLN - NORTH
Ground plan of the Roman and Celtic towns - from Greenisdash Hill.

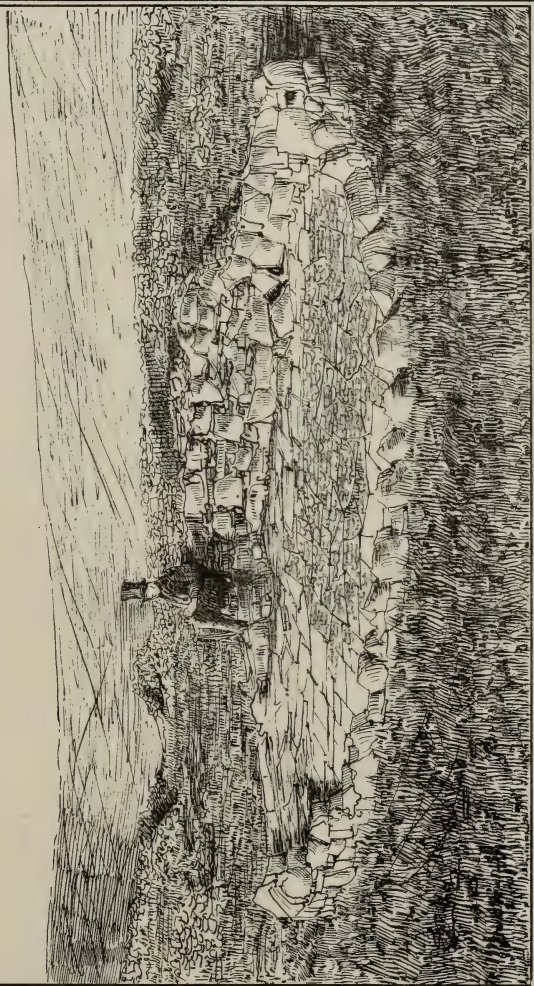
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THE OLD CELTIC TOWN-GRAVES, ASH: LINNORPE: NORTH 51.
Looking on the south side of the Remains of the Western part of the place as A.





DRAWN AND LITHOGRAPHED BY F. R. WILSON
ARCHEOLOGICAL, 1862.

THE OLD CELTIC TOWN GRAVES ASH HUT CIRCLE



RELICS FOUND AT OR NEAR THE OLD CELTIC TOWN OF GREAVES ASH:
LINNHOPE NOTTINGHAMSHIRE.
(ALL FULL SIZE)



POTTERY FOUND AT GREAVES ASH
LINNHOPE:
1.



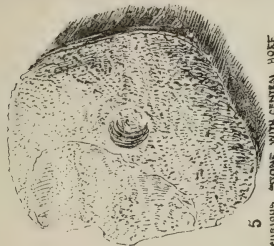
POTTERY FOUND NEAR WEST ENTRANCE
CHESTERS:
2.



FLINT JAVELIN OR SPEAR HEAD FOUND AT:
CHESTERS:
3.



METAL BLADE FOUND AT
GREAVES ASH:
4.



5
CURIOUS STONE WITH CENTRAL HOLE
FROM NUT SHELLS: CHESTERS:



6:
GLASS BEAD FROM ROUND SNAILING
SHELLS: CHESTERS.



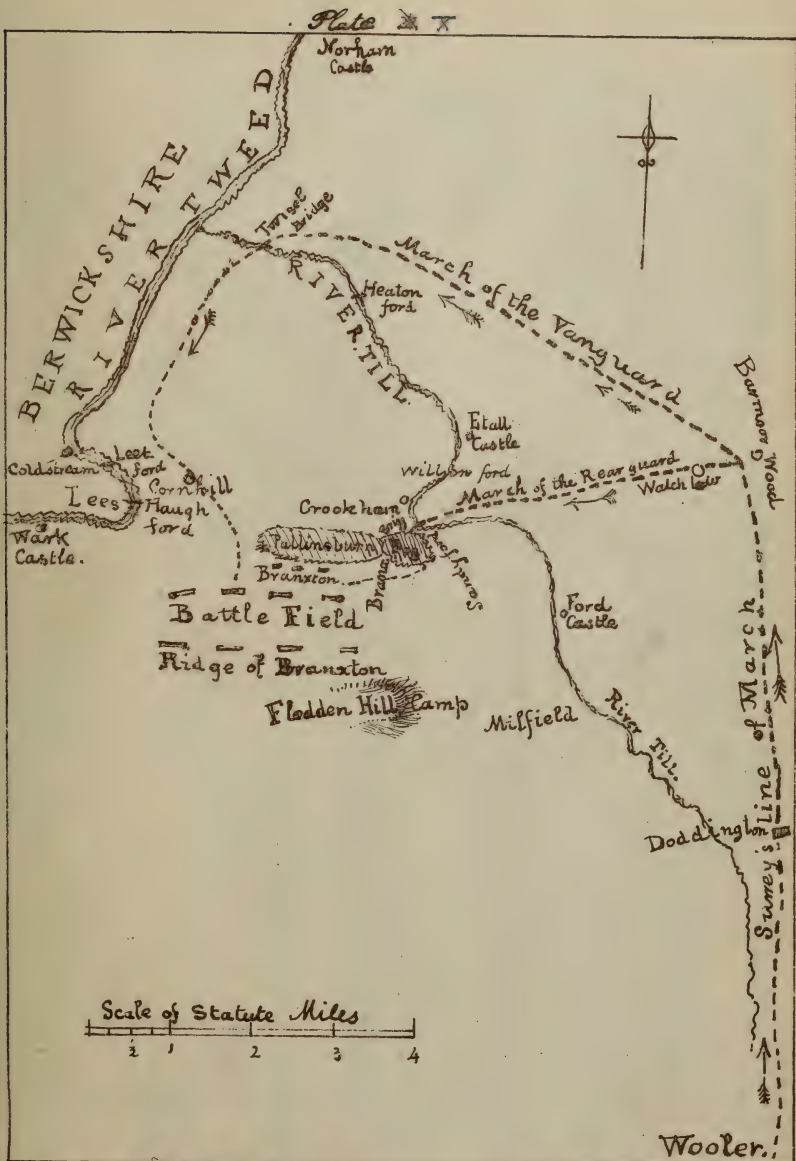
7:
FRAGMENT OF GLASS ANNULET
FOUND AT GREAVES ASH:





CLIFF ON RIVER OXNAM ROXBURGHSHIRE, WITH ANCIENT CAVES.







1.

Lennox & Argyle

B r a n x t o n R i d g e o r H i l l

Arrangement
of troops
before battle

Bothwell
The King

Crawford & Montrose. Huntley & Home

Stanley

Surrey

V i l l a g e
Horse
Dacre of
Dunelm Co. n

Lord Tho's Howard

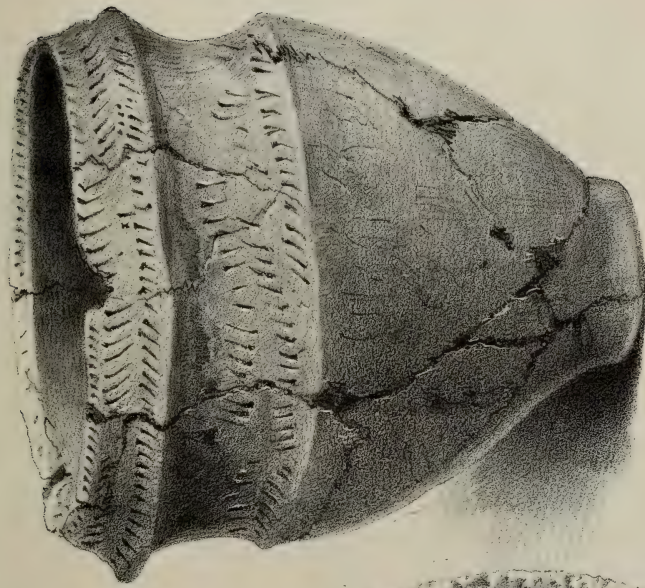
.2.



Flodden Field. A view of the Battle ground of Flodden Field. M. B. 2. Battle of Flodden, 1513.



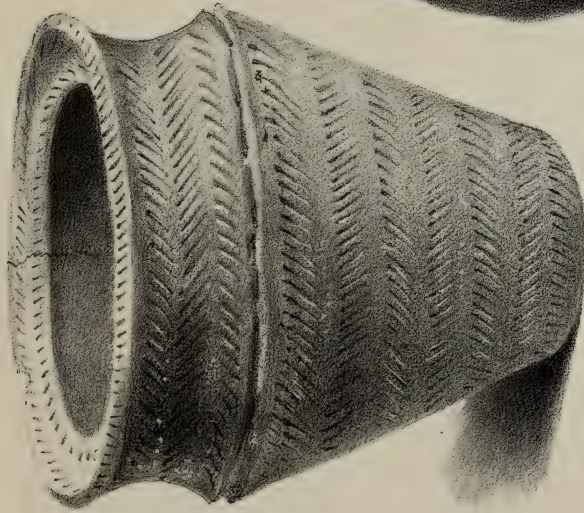
FIG. 2.



$\frac{1}{2}$ Size.

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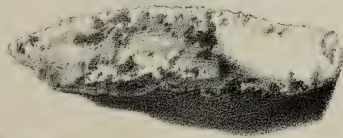
FIG. 1.



$\frac{3}{4}$ Size.

John Storey, del. at lith. Newcastle.

FIG. 3.



Full Size.

URNS AND FLINT ARROW FROM BARROW AT FORD.



FIG. 3.

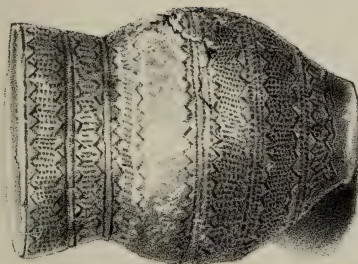


FIG. 4.

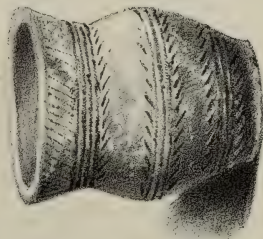


FIG. 1.

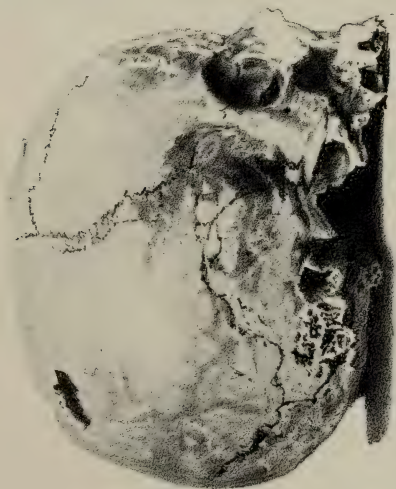


FIG. 2.

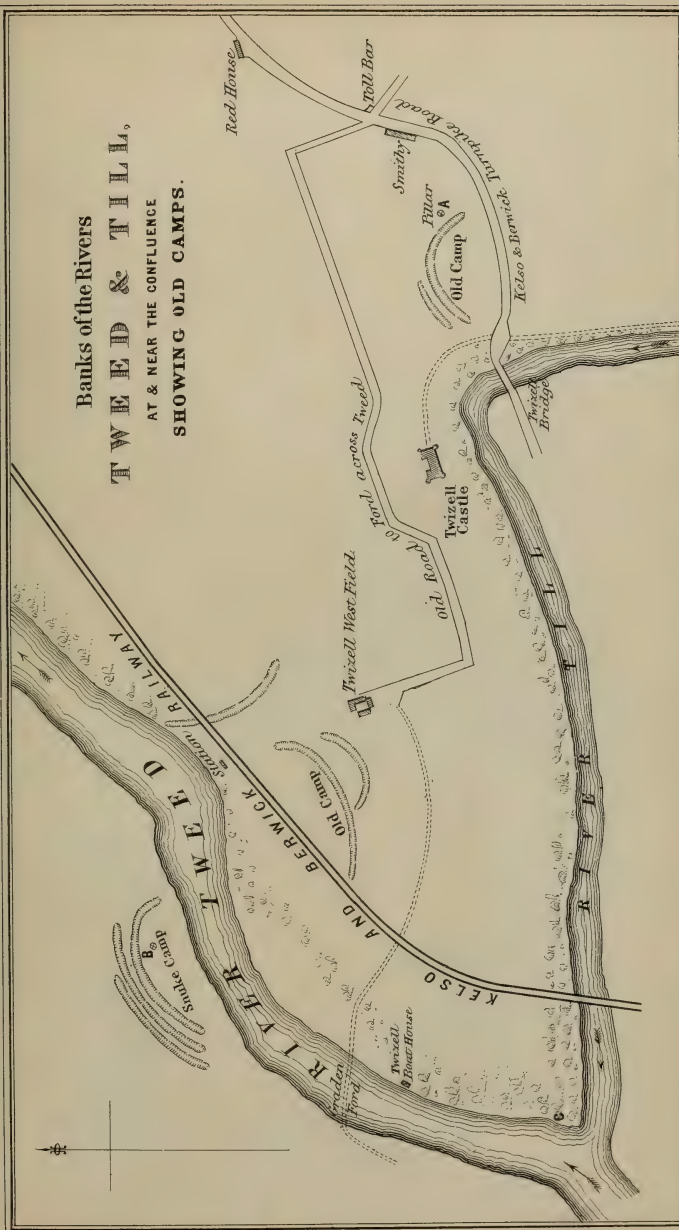


Iron Age, 1891, p. 114, Newcastle.

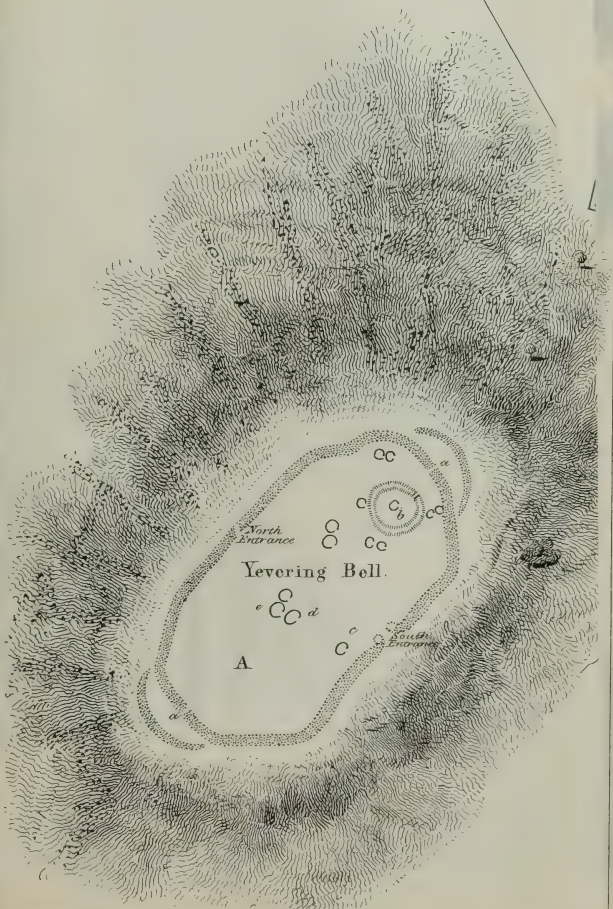
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Banks of the Rivers **TWEED & TILL,** AT & NEAR THE CONFLUENCE SHOWING OLD CAMPS.









Celtic Remains on Yew-na-Bell and Paces adjacent

Scale 0 Chains or 116 Yards to 1 Inch





